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by ALEXANDER BLADE

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## *All Stories Complete*

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**THE OCTOPUS OF SPACE** (Novelette—16,000) ..... By Alexander Blade ..... 8

Illustrated by Edmond Swiatek

Spacemen had entered the Blind Spot of Space many times—but none of them ever returned . . .

**PLANET OF THE DEAD** (Novelette—20,700) ..... by Rog Phillips ..... 36

Illustrated by Jan Wills

Was it possible for a man to die and still live? Jerub knew it was — from experience!

**THE FORM OF HUNGER** (Short—8,500) ..... by Craig Browning ..... 70

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The planet looked commonplace enough, but Earthmen had reason to fear it, because—

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The strange little globe looked harmless—but Featberstone knew better, for a reason . . .

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Clay Bowen knew something was wrong on Io when the giant beacon's light began to fade . . .

Front cover painting by Edmond Swiatek, illustrating  
a scene from "The Octopus of Space."

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# The Editor's Notebook

## A CONFIDENTIAL CHAT WITH THE EDITOR

**Y**OU'VE NO doubt already taken a good look at the contents page for this month, so we don't really have to tell you that four of your top favorites have stories in this issue. But what we will do is tell you a little bit about the stories before you read them. To sort of whet your appetite!

**F**IRST OFF, there's the cover story, "The Octopus of Space" by Alexander Blade. You know that Alex has a habit of coming up with really swell ideas as the basis for his yarns, and this one is no exception. Alex writes about a "Blind Spot" in space, an area near the planet Saturn that to all intents and purposes is a void within the void. It seems that Earthmen had been trying to solve the secret of this "Blind Spot" for years—trying to find out what had caused it, and more important, just what it was. But there hadn't been very much success because every Earthman who ventured into the forbidden area—as it came to be known later—was never heard from again. It was then that two of the top agents of the Solar Patrol, Burt Lang, and Jeb Harrow, decided to find out for themselves—even if it meant their death. So they took off for Saturn and entered the Blind Spot, and—but that's about as far as we can go here. And we've really told you quite a lot at that. You'll find plenty of solid science-fiction in this yarn, and more than enough of suspense and action. We think Alex did a fine job. And we'd like to get your reactions too...

**R**OG PHILLIPS, always a top name on our contents page, returns this month with a long novelette entitled, "Planet of the Dead." Rog came in one day and asked a somewhat cryptic question: "Do you think it would be possible for a man to be dead, and yet still alive—scientifically?" Well, that last word kind of stopped us cold. We could see where it would be possible from a fantasy viewpoint, but scientifically was another matter. We told Rog so. And he only grinned at us in his knowing way and said: "You'll see." We did see. And now you'll see too when you turn to page 36 and start reading. You're in for a really swell chunk of pleasant reading, so don't let us stop you!

**T**HE FORM of "Hunger" is Craig Browning's latest contribution to the pages of your favorite magazine. And

we're not exaggerating when we say it's one of Craig's best efforts yet. Picture for yourself a world somewhere in space where death is impossible—or as near to being impossible as you can imagine. If that is true, then it would follow that a man could never die of hunger. Well, we've come this far, so what next? Just as a tip, we'll say that "hunger" is a rather loose word—it might not always mean just what you think! And that's exactly what Craig had in mind. As the title implies, "The Form of Hunger" might not be the bread-and-butter variety. So you can start reading the story now and find out for yourself just what it's all about. We think you'll be more than satisfied with the result.

**R**OBERT MOORE WILLIAMS is back again. That's always big news for readers of FA. And especially this month, for Bob returns with a short novel, 30,000 words of science-fiction that will hold you from beginning to end. "The Bees of Death" starts out with a man digging a ditch. Nothing unusual about that? The ditch-digger didn't think so either until his pick struck something hard in the ground and he finally uncovered what seemed to be a cannonball. His curiosity was aroused and he bent to pick it up. That was when the strange series of events began. For the cannonball rose from the hole in the ground and zoomed around the man's head. ... That was the beginning. The ditch-digger reported the incident to his employer, Professor Featherstone, and the professor became strangely excited, so much so that—but we stop right there. You'll find out why the professor was excited, and just what the strange "cannonball" was when you begin reading on page 36. After you've finished, drop us a line and let us know how you liked it.

**F**INISHING up the issue is a new story by Warren Kastel, "The Beacons Must Burn." This is an inter-planetary yarn that centers around Io, one of the four principal satellites of Jupiter. A giant space beacon on the satellite was in danger of being destroyed. And if that happened ... But you'll find out for yourself, so go ahead.

**N**EXT MONTH we've got a real treat in store for you, a long novelette by top favorite S.M. Tenneshaw. Watch for "Queen Of The Ice Men." See you then ..... WLH

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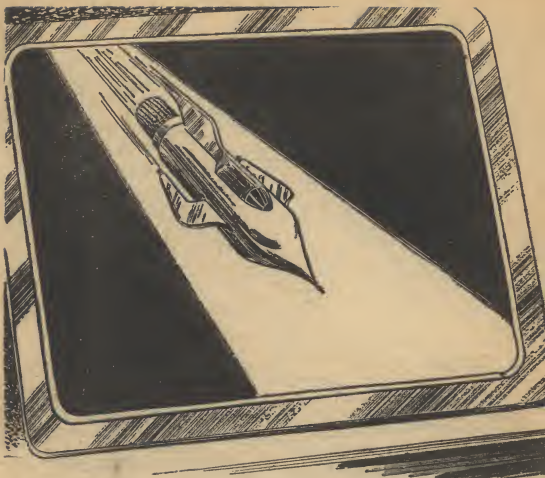
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**What was this terrible portion of the void known as the Blind Spot? Spacemen had tried to find the answer — and found death!**

**T**HE TENSION had been growing between the two men for hours.

They sat there, the two of them; they sat in front of the visiplate in the control room of their small space cruiser. They sat staring into the plate. Watching it. Watching and waiting.

And Saturn, with its luminescent rings grew larger.

But it wasn't at Saturn that their eyes were fixed, staring tensely, expectantly. The ringed planet was no real novelty to them. They had seen it

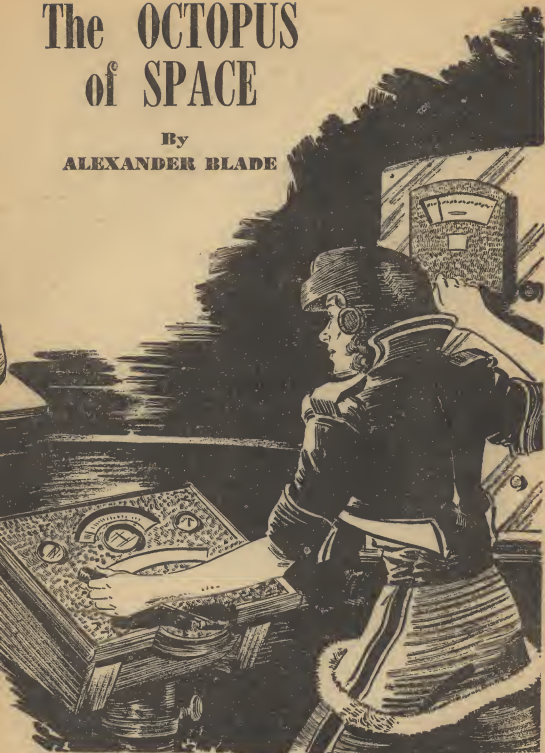
many times before. For space commerce passed the huge planet on the skyways between Earth, Mars, and Uranus. But that was on the other side of Saturn. The side that was safe for spacemen. Away from the Blind Spot. Far from the Forbidden Area of the void.

They sat and stared.

Jeb Harrow sat with his hands resting lightly against the control panel, his heavy-set features tense. He didn't like this assignment. He had argued with Burt Lang about accepting it from Solar Patrol HQ

# The OCTOPUS of SPACE

By  
**ALEXANDER BLADE**



She adjusted the controls of the machine and watched the space ship approach . . .

on Earth. He was young and healthy and loved life. He wanted to live to enjoy it. And no Earthman had been known to return from the Forbidden Area...

Burt Lang's fingers played lightly with the controls of the ship as he sat and stared into the visiplat. His face was tense too, but it was a tenseness of excitement rather than fear. His lean youthful features were set in an expression of challenge. A challenge to the unknown quantity out there in the void. That area they were rapidly approaching, far on the outer fringes of Saturn's wispy rings.

Lang had sought the assignment from GHQ on Earth. He had mentioned it to Jeb Harrow first, and Harrow had hedged. But Lang knew that where he went, Jeb would also go. They were a team. A team that had grown out of the ranks of the Solar Patrol. They had met as junior officers and their friendship had been a bond from the very beginning. But it had gone much deeper than that. For from the very first they had formed a team that sought the most difficult assignments on the Patrol's docket. And each assignment had been carried out swiftly, and expertly.

And gradually they had risen in the Patrol. From junior officers to Staff Field men. And finally, when they had broken up Sando Trane's movement to take over the government on Mars, they had been awarded the coveted distinction of Detached Service.

In the whole Solar Patrol there were only fifty men in the Detached branch. It was the highest honor an officer could achieve. It meant that he could pick his own assignment, work independently of the Home Office, and yet call upon the full resources of the Patrol whenever the occasion warranted.

Burt Lang was proud of this fact. And he knew that Jeb Harrow was too. And while Jeb often talked of quitting and settling down to a quiet life on Venus, Lang knew that deep inside the man, Harrow loved danger and the excitement of a new case as much as he did.

But as he stared at the visiplat now, Lang wondered if maybe Jeb had been right this time. Had they finally bitten off a bigger assignment than they could handle? For what was actually known about the Forbidden Area?

**H**E PONDERED the question mentally. For years the astronomers on Earth had studied the strange area near Saturn. An area of utter darkness. An area through which not the slightest light could be ascertained. There were stars that twinkled their light through the vast stretches of the void all around the dark area, but not one could be seen through it.

It had been called the Blind Spot at first. Just a spot in space where light, for some astral reason, was unable to penetrate.

But then had come space travel.

Almost from the first, when man had been able to stretch his arms toward the sun and the far planets, one of the first objectives had been the Blind Spot. For it held a mystery that had to be solved.

But it never had been solved.

Men reached the Blind Spot. Men in space ships.

But they never returned.

Not a trace. Tele-radio communication had been abruptly severed once the ships reached the dark pool in space. And the ships were never heard from again.

It was then that the area had been outlawed by the Supreme Council. It had been named the Forbidden Area,

a tract of the void that all spacemen shunned. The commerce lanes between the planets were on the other side of Saturn. Far from the Forbidden Area.

That was all that was known. It was all that Burt Lang knew, now as he sat staring into the visiplat.

Beside him he felt Jeb Harrow move in his seat.

"Burt..."

Lang turned his gaze from the visiplat and stared at Jeb for a moment. He saw a look of worry on Jeb's face that surprised him. Jeb might feel tense, he might even feel a tinge of fear, but he usually never showed it. It made Lang frown.

"Yes, Jeb? Something wrong?"

Jeb Harrow shrugged and looked away out through the visiplat. Lang got the impression that Jeb didn't want to look at him in that moment.

"I was just thinking, Burt. We're not the first men to try and solve the secret of the Forbidden Area..."

"I know that as well as you do, Jeb," Burt Lang answered, and his eyes continued to watch Jeb closely.

"What reason do we have to think that we will have any better luck, Burt? After all, there's only two of us."

The frown on Burt Lang's features intensified.

"We've taken on assignments that nobody in the Patrol wanted to tackle, remember, Jeb? We've always managed to do our job before. Why should this one be any different?"

Harrow continued to gaze into the visiplat at the rapidly approaching Forbidden Area. Already its great mass was obliterating the normal section of the void. It seemed to Harrow as if the ship were setting itself to plunge into a bottomless well. Into utter nothingness.

"You're right about our other assignments, Burt," Jeb said quietly:

"But they were always about things we knew. Men who defied the law and had to be caught and punished. This is something different. I have the feeling somehow that it's bigger than man and the things he knows..."

LANG'S jaw was set in a hard line. Then abruptly he relaxed. He knew suddenly that Jeb was only voicing the same feelings that he himself felt subconsciously. The difference was that he had steeled himself against those thoughts. Fought them down deep inside him. He was glad now that Jeb had voiced them. And he found the words he wanted to say.

"It is big, Jeb. And that's just it. It's a challenge—the biggest challenge in the whole solar system. It's a problem that no man has ever licked—but that doesn't mean that it can't be licked. Do you remember how we promised ourselves when we first teamed up that someday we'd tackle this job? All of our work in the Patrol has been leading up to this.

"Of course," his voice suddenly seemed to halt and he half turned his gaze away from Jeb, "we can still back out. If you're really afraid about this..."

As the words left his lips, Lang saw Jeb turn his eyes away from the visiplat and stare at him. He heard Jeb's breath come in sharply and Jeb swore.

"Who the hell's afraid? You know me better than that! I wouldn't turn back even if the Supreme Council ordered us to!"

Lang's face held a grin as the heated words left Jeb's lips. He knew now that the momentary indecision was past. That the subtle fears were gone now. There was only the job ahead.

He turned his attention once again



to the visiplat. His eyes narrowed thoughtfully as he scanned the full area of the plate. Only on the farthest edges of the screen was there a star to be seen, and the stygian blackness was quickly enveloping even the last few.

Lang's fingers played expertly over the controls of the ship. He felt the mighty blasts of the rocket jets quiet down and the forward retarding jets take hold.

The ship began to slow its swift approach to the Blind Spot.

But almost as soon as Lang's movements slowed the ship, he suddenly saw that he had miscalculated the distance. He had meant to stop the ship in space at the edge of the Forbidden Area and scout the outer fringe, trying to probe its depth.

He heard Jeb's voice come tensely.

"We're going into it, Burt!"

But Lang was grimly aware of the fact. And his fingers shot across the control panel in frantic haste. He fed full power to the retarding jets and tried to veer the ship in a sharp arc away from the blackness ahead.

For a bare instant the ship responded to his touch at the controls. It started to veer, and the thundering power of the retarding jets jerked him and Jeb against their safety straps.

Then suddenly the thunder of the jets vanished. The mighty braking force of the rockets faded away. The ship stopped its sharp veering arc and seemed to hang suspended, rolling in a sea of invisible waters.

In the same instant Lang felt his body relax against the strain of the safety strap around his waist. His body seemed to be weightless, and for a moment a wave of dizziness swept over him.

He heard Jeb moving in his chair beside him.

"You were too late, Burt—we're in

it..."

He heard Jeb's voice come hoarsely, with a note of awe in it.

And Lang suddenly felt the same way. He stared incredulously at the control panel, saw that the switches were still at full power, and yet the mighty roar of the jets had gone.

Vanished into nothing.

**I**T WAS AN unbelievable sensation. His body felt strangely detached, and the control room of the ship was filled with a great quietness. It was as if a mighty hand had closed over the vessel, shutting it off from all sound and motion.

Lang stared into the visiplat, into the swirling utter blackness that met his gaze. And for the first time he felt a chill of the unknown sweep through him. He felt helpless, powerless to do anything. He had never felt that way before in his life.

And then suddenly he heard a sound. Beside him, Jeb Harrow's voice came in a hollow note of incredulity.

"Burt—I must be crazy—we seem to be standing still..."

Lang felt the chill pass from him as he heard Jeb speak. He turned his eyes and looked at Jeb. Slowly he nodded.

"You're right, Jeb. We are standing still. The controls are dead..."

As he said the words, Lang realized that his voice sounded hoarse. And his eyes stared back into the visiplat. Back into the black nothingness. He heard Jeb speaking.

"What happens now, Burt? How do we get out of here?"

And Burt Lang was wondering the same thing. Was this the answer? Was the Forbidden Area a weird hole in the void where all time and motion ceased to exist? Were they doomed as other Earthmen had been? Would they too never return—must

they sit in their space ship until their food and water ran out? Was that the answer?

Even as the question formed in his mind, even as the chill started to creep over him again, his eyes suddenly widened in amazement as he stared into the visiplat, and beside him he heard Jeb Harrow gasp.

The blackness had turned a grayish color, and now there seemed to be a swirling cloud-mist.

And out of the mist came a fantastic shape. A thing that brought a look of astonishment to Burt Lang's features.

For he was staring at a gigantic creature that resembled, as near as he could tell, an octopus!

"Burt—my God—what is it?"

But Lang couldn't answer Jeb Harrow's question. He could only stare at the weird thing hanging out in the void.

And as he stared the creature seemed to move closer to the ship. Its long tentacles waved in the mist that enveloped it. Those tentacles seemed to expand, to grow in size even as he watched.

Lang knew it was impossible. He could not be seeing what his eyes told him he saw. But it was there nevertheless. Out in the emptiness of space. In the heart of the Forbidden Area, the Blind Spot, the well of nothingness. It was there, a giant-shaped octopus. It defied all reason. It was beyond the bounds of scientific logic.

And the octopus moved closer, its tentacles reaching out for the ship.

The movement became ominously evident as Lang watched. He knew suddenly what the creature was doing. Those tentacles would slither over the ship—and when they did...

He saw something else then. Something that made him lean forward in his seat in intent fascination.

The figure of a man materialized out of the grayish mist.

A man clad in the thin plasti-net garb of the spaceman!

And beside Lang, Jeb Harrow gasped.

"That's one of Sando Trane's men! Remember on Mars—"

IT WAS ALL too apparent to Lang. Jeb Harrow was right. It was one of Sando Trane's men. But that was impossible—what would Sando Trane be doing here in the Forbidden Area? Where had this man come from?

Lang knew he couldn't answer the questions even as they rose in his mind. He could only stare into the visiplat as Jeb Harrow was staring.

The spaceman was floating slowly toward the giant creature. And the octopus-like thing suddenly became aware of him. Lang saw the spaceman thrust out a long electro-spear, aiming at the creature's head.

Once that spear struck there would be an explosion that would tear the creature to pieces. Lang was aware of the deadly power of the electro-spear.

The point of the weapon lanced into the creature's head.

But there was no explosion.

Nothing happened.

Nothing except the long moving tentacles of the octopus that reached out and enfolded the spaceman.

And before Lang's startled eyes, the body of the man seemed to disintegrate in a puff of vapor.

It happened in a second. And then it was over. The spaceman vanished, the grayish mist swirling in the space he had been.

Horror filled Lang's eyes, and a dread feeling crept through him. What weird forces were operating in this hellish portion of the void? It was madness—impossible, incredible

madness. But it was happening...

"It's coming back for us!"

Lang heard Jeb shout hoarsely beside him.

Then he saw the giant creature moving once again for their space ship. Now Lang knew what was coming. Those long tentacles would envelope the ship. And when they did, the ship would vanish in a puff of vapor.

He knew suddenly what the fate of other Earthmen had been. Men and ships that had dared to venture into the untracked void that was called the Blind Spot.

And he knew that in moments he and Jeb Harrow would be following the others.

Desperately Lang pulled at the controls operating the forward electro-guns. If he could only get one burst into that creature. Just one...

But the controls were dead. Nothing happened.

He knew that Jeb was watching those tentacles reach out now, even as he was. And he knew that Jeb must be thinking the same thoughts he was too. The last thoughts that would ever cross their minds...

A brilliant flash of light suddenly blinded Lang.

He tensed himself, waiting for death to claim him. But even as he tensed he knew that the creature hadn't touched the ship yet. What then?...

**T**HE LIGHT engulfed the ship and drove the swirling grayish mist back. And as the light grew in intensity, Lang saw that it had a pattern.

It seemed to be a funnel of radiance. And as his eyes became accustomed to it he saw that it was just that.

A long funnel of light that engulfed the ship like a protective

shield.

The jets of the ship suddenly thundered into life. And Lang felt himself jerked in his seat before the control panel as the ship shot forward into the funnel.

And then he saw something else.

Far ahead, along the funnel of light down which the ship lunged, a figure appeared, shimmering in the light.

The figure of a girl. A girl clad in a form-fitting tunic of silvery material.

He heard Jeb gasp in amazement as he saw her too.

But Lang had eyes only for the girl. He stared at her—the bronze gold of her hair forming a halo around her shoulders—the smile on her face as she looked at him.

And then she was gone.

And there was only the funnel of light down through which they plunged.

"This is impossible—we must be mad!" Jeb Harrow gasped out. Then his voice suddenly calmed. "What do you make of it, Burt? This funnel—it might be another trap."

Lang shook his head. He was remembering the face of the girl. The way she had smiled at them. He didn't know what or who she was, but he was sure of one thing.

"Whatever it is, Jeb, it saved us from that creature. And I'm also certain that there's human intelligence behind all this. You saw the girl..."

"And I also saw one of Sando Trane's men!" Jeb answered sharply. "How do you explain that?"

Lang shook his head.

"I can't explain it anymore than you can. All I know is that this funnel reacts against the Blind Spot. The ship is working again. That proves it. Anything else will have to wait."

And as he spoke his eyes stared into the funnel. He saw that it was

nearing an end directly ahead.

His fingers moved over the controls of the ship and the forward retarding jets took hold, slowing the mad plunge of the vessel.

Then suddenly the funnel was behind them.

And once again Lang stared in amazement into the visiplat.

They were flying over the surface of a planet! A world that had never been discovered. A planet deep within the Blind Spot of space!

NORLA'S slim fingers flicked over the relays of the sono-controller.

"I'm taking over the control of their ship now, Gurrid. I'll land it close to the valley's mouth."

She passed a hurried look at her brother. Gurrid was frowning at her, his face a mixture of emotions. He wasn't sure if he approved of his sister's actions at the moment. What she was doing could turn out to be very dangerous. He voiced his thoughts.

"If Mech-an should put a tracer on us everything would be lost. Norla, why must we bring these aliens in like this?"

The girl smiled patiently at Gurrid.

"Don't worry about it, Gurrid. I've scrambled the frequencies. Even Mech-an and all the mighty machines he controls can't get through to us now. We're safe. Look—the first ship is responding to the controller!"

She looked into a view-screen in front of the big machines she was operating with her delicate fingers. The screen showed a space ship slowly arcing down the heavens toward the lip of the mountain range that girdled the valley on the far end.

But then a frown creased the girl's smooth forehead. She saw a second ship emerging from the funnel, following the first. She had expected the second ship to follow the first

one down to a landing. But instead, it was turning in a sharp arc and heading away from them.

"I can't control both of them at the same time—Gurrid, why do you suppose that second ship isn't following the first? They must have both come together..."

Gurrid clenched his hands and the worried frown deepened on his face.

"I don't like it, Norla. That other ship—it's heading away from the valley, toward the City of Machines. Do you suppose Mech-an put a controller on it?"

The girl studied the screen for a long moment. Then she shrugged.

"If he has, there's nothing we can do about it. We'll find out more when we talk to those in the first ship."

And as she said the words her fingers played smoothly over the sono-controller. She watched as the ship settled slowly to the floor of the valley outside. Then she shut off the machine and the screen went blank.

"Come on, Gurrid, they've landed."

Gurrid put his hand grimly on the sword he wore at his belt.

"I hope you haven't made a mistake, sister. Mech-an's arm is long..."

But the girl was not listening to him. She had stepped lithely across the stone floor of the room to a metal door at the far end. It opened from some electronic control as she neared it and she passed through. Gurrid followed her with a resigned shrug to his powerful shoulders. His sister was one he had trouble understanding. But her tactics had proven sound in the past, so he didn't question them further.

Norla walked through the great cavern beyond the door, past the groups of armed men who were watching her intently as they sat before great stone tables idly cleaning their swords. As she passed them

with Gurrid following, some of them arose at Gurrid's nodding signal, to follow.

**N**ORLA SAID nothing as the men trounded silently behind her. Then she had reached the end of the great cavern and a huge metal door slid soundlessly aside.

As she passed through her eyes sought out the tapering figure of the space ship that rested on the smooth valley floor. She was in time to see a door open in the side of the ship and two men slowly descend to the ground. A faint smile wreathed her full lips as she saw them leveling strange looking weapons in their hands.

She kept walking until she had reached within a few yards of the men. Then she stopped. Behind her she knew her men had also stopped. Only Gurrid moved up to stand at her side. She was aware that Gurrid's hand was holding a sword.

But then her attention was fastened on the two men. They were both tall, and were dressed similarly in military looking uniforms. But one was heavier than the other, with fuller features, and a stubborn cast to his jaw. The other man had a lean face with hard grey eyes. And though the eyes were faintly puzzled now as she looked into them, she was aware that this man was handsome. And for a moment she felt a blush come to her own features as his eyes swept over her figure.

She felt Gurrid move closer to her and saw the other man raise his weapon. Gurrid's sword arm came up, and Norla raised her arm commandingly.

"Stop! There is no need for weapons here. We are friends."

As the words left her lips she saw the handsome one's face suddenly smile at her. And with the smile, he put his weapon in a holster at his

side.

"I am Burt Lang, from Earth. My partner is Jeb Harrow. And you—"

"I brought your ship through the Dark Shield. I am called Norla."

Lang nodded slowly as she spoke, watching her closely. He knew without a shadow of doubt that this was the same girl he had seen in the visiplate. The smooth, beautiful features, the bronze gold hair, the slim figure...

"The Dark Shield?" Lang rolled the words out slowly. Was she referring to the Blind Spot—the Forbidden Area?

Norla nodded. "Yes. Mech-an does not know that we have a sono-controller. He would have had you killed in a moment more..."

Lang looked over at Jeb Harrow. Jeb's eyes were filled with questions, just as were his own. And he could see that there was still distrust in Jeb's eyes, for he still held his proton gun in his hand. As he looked at Jeb, the Earthman glanced over at the girl.

"If you're friendly, why the armed guard?" Jeb's voice was hostile.

The girl laughed lightly.

"You mean Gurrid," she motioned to the man at her side and Gurrid reluctantly lowered his sword arm. "Gurrid is my brother. He is more cautious than I, and, I fear, lest trustful. He thinks it was a mistake for me to bring you to Mechnol. I see the same lack of trust in your eyes."

Lang watched Jeb Harrow slowly flush under the polite accusation of her words. He covered his embarrassment with another question.

"Just who are you? To us you are alien, and yet you speak our language."

Norla glanced back at Lang as she replied to Jeb Harrow's question.

"Our tongues are the same, just as

our worlds were once. But this is no place to talk. You must both come with us to where we will be safe. Even now Mech-an may have his spy rays searching."

**L**ANG FROWNED as the girl mentioned the name Mech-an again. But before he could ply any questions of his own she turned and started to walk back the way she had come. He watched Gurrid move protectingly behind his sister, and then Lang looked across at Harrow.

"What about the ship, Burt?"

There was a question in Jeb's eyes that Burt didn't miss. He saw that Jeb was thinking it would be wiser for them to stay with the ship. Wiser and safer.

Norla turned as Jeb's question reached her.

"Your ship will be safe. It will be taken into the great cavern. We can not leave it out here for Mech-an to find."

Again the mention of that name. And Lang found a burning curiosity growing within him. He wanted to find out more about Norla.

He motioned to Jeb.

"I think we better do as she suggests, Jeb. After all, she did save our lives..."

Harrow's broad shoulders shrugged resignedly and he holstered his gun. Then he moved beside Lang as they walked toward the opening in the mountain ahead of them.

The girl lead the way through the large cavern, past the groups of armed men who stared curiously at them as they passed. And finally they entered the smaller room with the machines. Lang's eyes widened in wonder as he stared at the complicated mechanisms.

The girl motioned him to a couch-like piece of furniture that seemed to be made of some plastic substance. He

followed Jeb over to it and sat down, conscious of the fact that only he and Jeb, Norla and Gurrid were in the room. Gurrid had shut the door behind him and was standing with his back to it, his eyes still plainly saying that he didn't trust them.

Then Lang looked over at the girl.

She had walked up to the control panel of the machine and flicked a switch.

There was a loud humming from some source of power, and tubes began to glow as the screen over the mechanism formed an image.

He was staring at the valley outside, and the space ship resting close-by.

"There is nothing to fear. I am merely going to move your ship into the great cavern where it will be safe."

And as Lang watched, her fingers sped swiftly over the controls of the machine. And his eyes, fastened on the screen then, saw the space ship suddenly rise from the ground and begin to move toward the side of the mountain.

A large section of the stone wall of the mountain slid back, revealing a perfectly camouflaged opening. And the space ship moved through the opening and was swallowed up by the mountain. Then the opening slid shut again.

Norla flicked off the machine and turned to look at Lang's puzzled face. "I merely used the sono-controller, just as I did to guide your ship to the valley a short while ago. We are safe from Mech-an now. There is a protective screen over the mountain that even his superior spy rays cannot penetrate."

Lang shrugged questioningly.

"Everything you've said since we've been here has been veiled in mysterious reference to someone you call Mech-an. Would you mind explain-



ing..."

The smile faded from the girl's face and a serious expression took its place. Lang was amazed at the transformation. Her face now held a strength he hadn't thought possible, and in her eyes he read a message of conflicting emotions.

"Yes. It is time that I explain. Just before we left your ship, you said to your partner that I had saved your lives. That is true. And I did it for a purpose.

"You both wonder that we speak the same tongue. And you have many more questions in your mind. I will try to answer them all. But first I must start from the beginning..."

**A**ND LANG sat listening to her, watching the earnestness on her face, the dreamy expression that rose in her eyes as she spoke.

She told of a world in the solar system, the third planet from the sun, where a great civilization had existed countless centuries before. A planet called Earth, where science had risen to tremendous heights, conquering the secrets of the atom and space.

"But for all of their greatness in science," her voice continued, "the ancients could never defeat their own lust for power nor the wars that threatened to destroy them. It was then that a few scientists, with vision for a future mankind where war and destruction would have no place, decided to leave Earth and their civilization there, before they too were destroyed."

Lang listened, awe growing within him as he heard her tell of the secret flight from Earth in great ships of space to a verdant world that was a twin planet of Saturn. How the scientists built a fabulous City of Machines, the core of which was the great Mech which threw out a field of negative energy into space. A

field of energy that became the Dark Shield, ringing the entire planet, making it an invulnerable spot in the void, safe from any outside interference.

"With the perfection of the Dark Shield, Mechnol ceased to exist as a planet in the solar system. It was, and is, to this day, a world alone, cut off from all other worlds and men. And the wisdom of our forefathers was borne out. For the men of Earth did destroy themselves in great atomic wars. The secret of space flight was lost to them for centuries. For a time the Council of Mechnol kept a watch on the solar system, lowering the Dark Shield for that purpose. But then it was decided that here alone on Mechnol was there any hope for mankind to thrive in peace and scientific advancement. So the Shield was replaced and the great Mech sealed for all time.

"But through the centuries there were those on Mechnol who began to wonder if the original plans of our elders were entirely justified. For surely if a few ancients had sought a haven of peace, then there must be others in the outside worlds who felt as they did.

"But even these thinkers dared not break the law of the ancients. So Mechnol remained a world apart from the rest of the planets.

"It was then that Mech-an took over the Council. And with Mech-an came a tyranny that had been unknown for countless centuries. For any who dared to express their thoughts of the outside, were put to death. Mech-an ruled that there could be allegiance to nothing but Mechnol, in thought or action. That to question the laws of the Council was punishable by death.

"My father—and Gurrid's—was one of the scientists of Mechnol who dared to think of men and the outside



worlds. But he did his thinking in secret and never let Mech-an know of his dream. For our father had perfected a device which he called the sono-controller, a mechanism that could successfully counteract the effects of the Dark Shield for a brief period of time.

"He experimented with the sono-controller and caught brief flashes of the outside through the Shield. He became convinced that Earth had gained a high place in the solar system once again, and that unlike our ancestors, man had conquered the dread wars that had once destroyed him. He felt that the time had come for Mechnol to rejoin her sister planets and help man to rise to even higher status in the universe. For on mechnol there had been great scientific advancement, with only peace as the goal. Machines were perfected to answer every human need. And not one machine had been made for destructive purposes—only the great Mech that fed the Dark Shield to isolate the planet itself.

"But Mech-an found out about our father's experiment and confiscated the sono-controller. He would have put our father to death, but he had received warning of Mech-an's plan and fled into the hills with Gurrid, myself, and a few trusted friends.

"Gurrid and I were only children at the time, and we grew up in these hills, hidden away from Mech-an and his newly formed guard. We watched as our father laboriously built another sono-controller, and as more and more men joined our ranks from Mech-an's City of Machines. For a widespread feeling of discontent was growing in the people. They felt that Mech-an was doing wrong, that it was he who was breaking the law of the elders with his rule of tyranny.

"And then one day, a year ago, while our father was making a secret

journey to Mech-an's Capitol, he was captured..."

NORLA'S voice trailed off significantly, and from the sudden sadness that entered her eyes, Lang knew what words were unspoken in her mind. But then her voice picked up again and when she spoke there was bitterness in her words.

"Mech-an put him to death. He threw him into the Great Mech where the Dark Shield of energy tore his body to atoms..."

"Since then, Gurrid and I have led the forces opposed to Mech-an. We have dedicated our lives to accomplishing what our father set out to do. We want to destroy the great Mech that hides our world from other men. We want the people of Mechnol to be a part of the solar system again, to mix with other men and women...to enjoy the fruits of commerce with other worlds, to help build the great civilization that was started here by our forefathers..."

The girl's voice trailed off again, and Lang sat waiting for her to continue. But she had finished. And her breath was a great sigh as she stood with a determined expression in her eyes.

Lang found his voice then. And when he spoke his voice was touched with emotion.

"And you saved us from the Dark Shield of Mech-an thinking that we could help?"

She nodded slowly, her eyes resting for a moment on the silent figure of her brother standing at the door.

"Yes. Gurrid thinks I have done wrong, but I believe my father would have wanted it this way. There have been many ships from your planet that have come to Mechnol in the past century, and all of them have been destroyed in the energy field. Mech-an always uses this to prove

his point that outsiders, men from the other worlds, have only conquest on their minds, that they are trying to pierce the Shield and destroy Mech-nol.

"But I felt that if we could save one of these ships, and bring it to Mech-nol, then the people themselves could see the men from the outside—and judge for themselves. That maybe then the people would rise against Mech-an and destroy the great Mech.

"Gurrid felt that this was not the way, that we should remain hidden and fight Mech-an in our own way. And of course, he is right in one respect. Now that we have safely brought two ships through the Shield, Mech-an will know we have a sono-controller. He will do anything to capture us now before we can make a move against him..."

Only one thing registered upon Lang in that moment. And as the girl's words were impressed upon him he stared over at Jeb Harrow.

Jeb was frowning, and voiced the same question that rose to Lang's lips.

"You said two ships? But there was only one of us."

Norla shook her head.

"There was a ship following you. I assumed that you were both together. But when I guided your ship down, I couldn't put the sono-controller on the other. One of the men in that ship was killed by the creature of the Shield, a thing of negative energies created by the great Mech, resembling an ancient creature of your own world's seas which you called an octopus. But the octopus of the Dark Shield is not a thing of flesh and blood as you or I. It is a creation of terrible forces of the *ether*, forces that destroy all matter at contact.

"But the others in the second ship escaped... This is indeed strange, you not knowing about it..."

Lang's eyes had turned from the

girl and he was staring questioningly at Jeb Harrow. He remembered now how Jeb had exclaimed that the spaceman had been one of Sando Trane's men.

"Burt, I can't believe it—you don't suppose..."

Jeb's words trailed off and Lang nodded slowly.

"I'm afraid that's it, Jeb. Somehow, Sando Trane followed us into the Blind Spot. It couldn't be anyone else."

THE GIRL had been listening to their exchange of conversation. Now she interrupted them.

"Who is this Sando Trane you speak of?"

Lang looked at her worriedly.

"I'm afraid I'm going to have to break down some of the faith you have in the outside worlds. While it's true that war has been eliminated as a major factor, we still have men who conspire to gain wealth and power at the expense of others. You might compare them in a minor sort of way to your Mech-an. But we have law enforcement agencies to track these men down. Jeb and I are members of the largest of these inter-planetary agencies. And one of the men we've been after for years is a space pirate and revolutionist named Sando Trane.

"The ship you speak of as coming through the Shield behind ours could only belong to Sando Trane. It was one of his men who was killed by the octopus of your great Mech."

His words halted, and he could see the surprise on Norla's face as he spoke. Then he looked over at Gurrid as the girl's brother spoke for the first time.

"I knew this was a mistake, Norla! That ship was flying toward the City of Machines! If Mech-an should capture it Trane will be able to lead him to the valley. You know what will

happen..."

Lang didn't have to have Gurrid explain further. And he was way ahead of him with his own thinking. For he knew Sando Trane. And what Gurrid had hinted at would certainly happen. Trane would make a deal with Mech-an in exchange for the location of the valley. But Lang knew something else. Something that brought a chill to him. For if this Mech-an was the type of man Norla had painted him, then would his tyranny stop with the peoples of Mech-nol? Lang knew what a smooth talker and operator Sando Trane was, and it was not impossible to think that he and Mech-an would combine forces with the outside planets as the stake.

It was a big game. A dangerous one. Just the kind of game Trane would be likely to play.

Lang turned to Jeb Harrow.

"We've got to get Trane before he reaches Mech-an, Jeb."

He could see by Jeb Harrow's expression that he had been thinking along the same lines. Jeb nodded.

"You're right, Burt. Trane is our baby. We've been trying to get him for a long time. This is our chance."

Jeb arose as he spoke. But then Norla suddenly stepped forward. There was anxiety on her face as she looked at the two Earthmen.

"Wait! You don't know the risks you are taking! Mech-an will be warned by this time. He will be waiting to trap you..."

Lang shook his head adamantly.

"I'm sorry, Norla, but this is our job. Trane represents a threat not only to your world, but to ours. If we can get him maybe we can repay you in small part for saving our lives."

He had said the words with sincerity, and as he looked over at Gurrid, he saw that there was a sudden respect in the man's eyes. Gur-

rid moved forward suddenly and offered Lang his hand.

"I am sorry that I doubted you before, but I am convinced now. Norla was right in bringing you here, even though an enemy slipped through our hands at the same time. But you will need help on this task, and I will go with you. I know this country. You could easily get lost alone."

LANG FELT the warmth of Gurrid's hand in his. Then he watched as Gurrid clasped Jeb's big hand. A friendly smile passed between the two men, and Lang knew that a bond of friendship had been sealed.

"That's all right with us," Lang said, "if Norla doesn't object."

The girl's face had been clouded with a frown. But now suddenly it was clear. She nodded.

"Gurrid is right. You will need someone to guide you. He should go along. Just as I will."

The three men remained silent for a moment. Lang saw the worried look on Gurrid's features, but he noticed that he did not object. And he suddenly knew why.

Norla was the leader of this refugee group, and her word was accepted by everyone, even Gurrid. He saw that it would be a difficult thing to step in and contradict her decision. And yet he knew that it was necessary. There would be great danger once they lifted the space ship from the valley floor. And as he looked into the deep blue eyes of the girl he realized that he didn't want anything to happen to her.

"I don't think it would be wise, Norla," Lang said slowly. "After all, you are the leader here, and if you leave and something should happen to you, what of the rest?"

His words held weight he saw. For a moment he thought he had won the

point. But then he saw Norla's face grow thoughtful.

"What you say is true, Burt. But by the same token, if something should happen to you and Gurrid, then our plans would be hampered... And besides, you will need me. Only I know the sono-controller well enough to operate it. If you are to escape from Mech-an's machines, you will need me."

Lang looked over to Gurrid for help. But Gurrid shrugged his broad shoulders resignedly.

"What Norla says is true. If Mech-an should put a controller ray on your ship you would be as helpless as you were when Norla brought you in."

Lang looked back at the girl. He saw that her mind had been made up, and now that Gurrid had concurred, it was decided.

"We'll take the portable sono-controller. It will operate from the main machine here in the cavern."

Gurrid moved toward the door.

"I will go and instruct Parma what to do while we're away. We will have to maintain a close watch over the valley as long as Mech-an has a way of finding us."

Lang watched as Gurrid opened the door and passed through into the greater cavern beyond. Then his eyes switched back to the girl.

She passed him a quick smile, and Lang felt a warmth in her look. Then she was motioning toward the far corner of the room and a small, compact machine which rested on the floor.

"That is the portable sono-controller. We will take it with us."

Lang met Jeb Harrow's gaze as Jeb stepped forward. He saw that Jeb didn't like the idea of the girl going with them anymore than he did. But he saw Jeb shrug his shoulders and bend to pick up the machine.

Lang moved alongside to help him.

THE SHIP rose slowly from the cavern floor as Norla's fingers sped over the controls of the small machine in the control room. There was a hum of power from the machine, and Lang knew that it was drawing its power from the large machine in the cavern.

The ship floated through the opening in the side of the mountain, passed the silent groups of men who watched them departing. Then the metal door slid shut, sealing the cavern from the outside eyes.

Lang waited until the girl gave him a signal. She switched off the sono-controller finally, and nodded to him.

"The ship is under your control now."

His own hands worked smoothly across the control bank as his eyes scanned the visiplat.

The rockets thundered their power and the ship shot high into the sky over the valley. Lang levelled it off and following Gurrid's direction, set a course to the right of the valley.

His eyes took in the barren landscape, the towering mountains, rocky slopes, and the small verdant valleys that were sandwiched in between the mountains. He began to see why Mech-an must have had a hard time in finding Norla and her refugee band. There were countless mountains and countless valleys on the terrain beneath him. It would be like finding one grain of sand on a beach.

But then the awe of the heavens over his head gripped him. For unlike Earth or the other inhabited planets of the system, there was no blue sky. No sun shining down. Only a deep hazy blackness far above. He knew what that blackness was. The Dark Shield. The mass of negative energy that pulsed from the City of Machines. The terrible trap that protected this strange world from others of its kind, and by the same token,

was a trap of death for any man or ship foolish enough to blunder into it.

He turned his eyes from the visiplate to look at the girl.

She was seated directly behind him, beside the portable sono-controller. Gurrid sat over beside Jeb on the opposite side of the control panel.

"I don't understand how the sun's rays pierce through the Dark Shield," Lang said to her.

"But they don't, Burt. The light of Mechnol is supplied by great atomic plants in the City of Machines. Everything on Mechnol is supplied by machines."

Lang returned his gaze to the visiplate. His eyes were thoughtful as he stared out at the vast black curtain overhead. There was something ominous in it. Something that seemed to laugh down at him: As if to say he was helpless, trapped, that he was a fool to think he might pit his puny strength against the might of Mech-an and his machines.

...The minutes ticked away into infinity as Lang sat staring into the visiplate. And there was silence in the control room, except for the brief instructions of Gurrid periodically.

And always the landscape was the same. The mountains, the hidden valleys. The barren rocky slopes.

Then suddenly Lang tensed.

Beside him, Jeb Harrow came to life.

"Look—there ahead—"

Lang had already seen it. A shimmering silver haze in the distance. Beyond the point where the mountain range seemed to taper off into sloping foothills.

"It is the City of Machines," Gurrid said tensely. "We must be careful. Mech-an may have spy rays out even now."

**A**ND AS Lang watched the silvery shimmer come closer in the visi-

plate, he felt his heart sink. They had kept a watchful eye on the heavens, and the surrounding terrain for some sign of a space ship. But there had been nothing. Nothing but the barren landscape. If Sando Trane had landed somewhere on this route, he was safely hidden. And if he hadn't...

Lang tried not to think of that. For it meant that Trane could have gone to only one place. By sheer accident, or by the power of Mech-an's machines controlling his ship, Trane would have reached the City of Machines. And if he had their pursuit would be fruitless.

The girl seemed to sense his thoughts. For when she spoke there was worry in her voice.

"It would be better if we turn back now. I am afraid this Sando Trane has either eluded us or is in the hands of Mech-an. To go further will be dangerous..."

But Lang's lips were set stubbornly. He knew he didn't want to turn back—yet. There was something he had to see. And it might be his only chance. This fabulous City of Machines. It shimmered in a silver light ahead of them.

And as it rapidly approached, Lang saw something else. Something that brought a chill to him. That made him think the girl was right in wanting to turn back.

A broad pillar of blackness shot into the heavens from what seemed to be the center of the glimmering city. A blackness that shot straight up to be engulfed in the sky and become the dark curtain that shrouded the planet. That then would be the heart of the Dark Shield. The base of the great Mech that poured its negative energy into space.

And as he thought, the city suddenly took form. Lang's breath caught in his throat at the splendor of it. Spires that rose to great heights

from the flat surface of the land around them. The mountains had been left behind now, and even the foothills had flattened out. And the city rose like a gigantic jewel in a barren setting.

He stared in awe at great mirror-like expanses of metal that emitted a light that was blinding to the eye. Light that spread into the sky. Light that took the place of the sun on Mechnol.

And there were other machines. So many others that he couldn't count them let alone divine their purpose.

His thoughts were interrupted by Jeb's hoarse shout beside him.

"Burt! There in the center of the city—near the pillar of blackness— isn't that a space ship?"

Lang followed Jeb's pointing finger.

And he saw it.

It rested on the smooth wide expanse of a towering building's roof. A slim, tapering space ship. A ship he had seen before. A ship he had imprinted indelibly on his mind.

Sando Trane's ship. It could be no other.

"That's Trane's ship, Burt," Jeb confirmed his thoughts.

Lang felt the girl's hand touch him urgently.

"We must leave before it is too late! You should never have come this close."

**A**ND LANG agreed with her mentally. He was suddenly aware of the danger that surrounded them. In this gigantic City of Machines their space ship would be but a toy in comparison. And even the power of the sono-controller seemed to fade as the pulsing force of the great machines below became evident to him.

His hands moved swiftly over the controls, and the ship started to veer away from the city.

But as quickly as Lang's moved,

something else moved quicker.

He saw it coming and knew it was too late.

A long tendril of black energy that shot out from the main pillar of blackness in the center of the city.

He heard the girl cry out in fear as she saw it too. And he heard Gurrid shout to her.

"The sono-controller—quick!"

Lang's hands were busy as he tried to swing the ship away from that grasping tentacle of energy. But he knew that the girl had switched on the machine behind him for he heard the hum of power rise from it.

Then the black beam struck.

The ship shuddered and for a moment Lang felt a wave of pain and dizziness course through him.

Then suddenly the dizziness passed and his eyes cleared.

He saw the beam of blackness fan away from the front of the ship and spread out in grasping fingers of blackness. But the tendrils seemed unable to make contact with the ship again.

He breathed a sigh of relief, realizing that the sono-controller was working, counteracting the effects of the negative energy beam.

But his relief was short-lived. For as he tried to swing the ship away from the black beam, he found that the controls were suddenly useless. For the thunder of the jets was being dissipated in the stream of negative energy that surrounded the ship. It was like a tug of war between two mighty forces. And neither would give. Lang knew that it was only the slender thread of the sono-controller that was saving them in that moment.

And even as the thought crossed his mind he heard the girl exclaim sharply.

"The sono-controller—there's something wrong with it!"

He glanced around at her quickly. He saw her manipulating the controls



of the machine frantically. And he heard the power of the machine begin to fade away.

Across from him, Gurrid shouted.

"There must be something wrong back in the valley! Somebody must be shutting off the power!"

Lang's attention was taken by the savage lurching of the ship. He fought the controls grimly, trying to keep the vessel away from the searching black beam. It was closer now, nearly touching the ship as the power of the sono-controller began to fail.

"Do something!" he shouted back at the girl. But he knew that she was as powerless to do anything as he was. It was only an inner sense of frustration that had made him voice the words at her.

And then, abruptly, the hum of the sono-controller stopped.

Lang's fingers froze on the controls of the ship. He heard the two men shouting beside him, and the girl's gasp of fear.

His own eyes were riveted on the black beam. It suddenly seemed to leap forward, to cross the last gap that separated it from the ship.

And then the full force of the beam hit.

Lang was aware of a shrieking agony in his body and a whirling sensation of falling through limitless space.

Then there was only darkness as his consciousness left him...

**L**ANG REGAINED consciousness with the feeling that somebody was pulling him from the depths of a great well.

He opened his eyes and still the pulling continued. Then, as his sight cleared he saw that two men were pulling him to his feet from the seat before the control panel.

He stared dazedly about him for a moment, trying to focus his thoughts. All he could remember was the black

beam striking the ship with its terrible force, and then nothing.

The men stepped away from him as he gained his feet. He saw that one of them held his proton gun, while the other held a long sword, the point held menacingly.

Then he saw Gurrid and Jeb standing at the end of the control room. There were similar armed guards around them, and Norla was being held roughly by another guard.

The guard with the sword motioned Lang toward the door of the control room. He moved forward slowly until he was beside the girl. Then he suddenly moved sideways and lashed out at the guard who was holding her.

His first connected with the man's jaw and the guard released his hold on the girl and staggered backward. He heard her shout at him.

"Burt—it is useless—don't resist them!"

But as she spoke, Lang saw another guard step in close to him and bring his sword down in a slashing arc across his head.

Blinding pain gripped him and he staggered to his knees. He heard the guard laugh.

"Another move like that, alien, and you'll feel the sharp edge of my blade. It is only by the orders of Mech-an that you are alive now!"

And as Lang groped his way painfully erect again, he felt a sharp point pressing into his back.

He moved forward silently then, his eyes connecting briefly with the girl's. He saw no fear in them. Only a sullen resentment. Somehow it made him feel foolish. He had nearly done a rash thing that might have caused all their deaths. There was nothing to do but submit, as she had said.

Outside the ship Lang stared about as a group of guards waited.

The ship was resting on a smooth wide expanse of metal. He was surprised to see another space ship rest-



ing on the surface a short distance away.

Then it dawned on him.

That was Sando Trane's ship!

And he knew that somehow, Mech-an had decided that they should live, and had taken over their own ship and landed it on the roof beside the other.

The guards formed close ranks about the four and moved off toward the far end of the roof. Over their heads Lang could see a section of the roof that had been raised, revealing an opening that led downward.

And ahead, beyond the edge of the roof, rose the gigantic black pillar of negative energy. The Dark Shield, reaching up into the heavens.

Its close proximity could be felt, and as they stepped nearer to it, Lang was aware of the dizziness again.

Even the guards seemed in awe of the great black beam. For their ranks tightened perceptibly until they reached the opening in the roof.

Then Lang was walking down a wide set of metal stairs.

**I**T SEEMED that they walked for hours, and yet Lang knew that only a few minutes had passed. They had gone steadily down, through long corridors, and more winding steps.

And finally ahead loomed a great double door of gleaming gold. It swung outward as they approached and the ranks of the guards spread away from them as they entered a vast chamber.

Lang's eyes were stunned by what he saw.

The room itself was gigantic. He couldn't estimate its size from a single glance. But in the center of it, shooting up from what was obviously an open area in the floor itself, was the great pillar of blackness. It filled the room with a low hum of sound, a sound that jerked at the

very atoms of his being. The beam shot upward, and through a vast opening in the ceiling overhead. It was lost to his sight from that point on, but he knew that it continued out through the building and into space.

He tore his eyes away from the beam then as the guards continued to march them across the floor of the chamber, on a diagonal away from the black pillar.

At the far end of the room he saw a raised dais and a group of men gathered around it. Some he saw were guards, as those who were leading them. But the others, a small knot of seven men, were clad in garments he knew, even at a distance. They were men from the outside, men in gray uniforms. The uniforms of Sando Trane's men.

And then he saw the short, squat figure.

Sando Trane was standing at the edge of the dais to one side, his bearded jaw twisted into a grim smile as Lang and the others approached.

Then Lang's eyes swept up the dais.

There were two people sitting on a gleaming gold throne. A man and a woman.

The man was clad in a flowing purple robe that was joined around his throat by a band of inlaid jewels. He had a long, lean, aged face, with close-cropped gray hair that somehow lent him an air of false youthfulness. His eyes were black, and even from a distance, Lang felt them boring into him as he approached.

Then he glanced swiftly at the other figure on the throne.

She was beautiful. He could see that. A strange dark beauty that was enhanced by her long ebony hair. She was clad in a revealing gown of some metallic substance, that clung to her lithe body like a sheath.

Beside Lang, Gurrid's voice came

in a low murmur.

"Orna..."

Lang flashed a quick look at Gurrid as the man breathed the word out. He saw a strange look on Gurrid's face. One that was a mixture of anger, and something else. If it had been at another time, in different circumstances, Lang might have interpreted that look for one of bitter affection.

Then he stared back at the woman on the throne. The woman whom Gurrid had called Orna.

HER EYES had rested on Lang for a moment. And he saw a cold depth to them. A ruthless emotion that was carved even on her smooth features. Then he saw her eyes fasten on Gurrid at his side. He saw a change enter them. The coldness seemed to melt and for a moment he thought he saw her lips move in the forming of his name.

The guards came to an abrupt halt at the edge of the dais and they saluted with their swords. Lang looked at the man who sat beside Orna and saw him motion them away.

As the guards formed ranks on either side of them, Lang knew that he was staring at the man who controlled the City of Machines. The man in whose hands the destiny of Mechnol was held in an iron grip.

He stared into the stern features of Mech-an.

"So! Your journey has finally come to an end."

Lang was aware that Mech-an was not talking to him, but to the girl, Norla. She had stepped a few feet forward, ahead of Lang and the others, and returned Mech-an's taunting gaze.

"If my sono-controller had not failed when it did..."

Mech-an's sharp laughter cut down at them like a knife.

"It may come as a shock to you, Norla, but your sono-controller did

not fail. It was cut off from its power at the source!"

Lang saw the girl stiffen at Mech-an's words. And he knew what thoughts were in her mind at that moment. The same thoughts that were in his.

Mech-an voiced them.

"It was really very simple. When you brought the first ship through the Shield with your sono-controller, I'll admit I was surprised. I didn't think your illustrious father had managed to build one in his mountain sanctuary. But I managed to bring in the other ship, straight to the City of Machines.

"After I talked with the commander of that ship, Sando Trane of the planet Earth, I knew that all I had to do was wait for you to make a move. Your strategy was simple to anticipate. Since Sando Trane was an enemy of your two Earthmen, you assumed that they would lead me to your sanctuary. But you should have known that it is impossible to tell one valley from another in our mountains. You would have been perfectly safe, for a while at least, if you had not attempted to track down the other Earth ship.

"I was waiting for you to make that move. I had a spy ray ready to mark your position if you moved the Earth ship from your sanctuary. I've known of your location in the hills from the moment you set out for the City of Machines.

"And my patrols in the hills were alerted and converged on your valley. They had explicit instructions to kill every man in your group, and to destroy the sono-controller.

"As you can see, by your presence here, my orders have been partially carried out already. I am waiting for word now that the last rebel on Mechnol has been eliminated."

The girl's face blanched as Mech-an gave her the mocking details. In-

wardly Lang felt a great fury obsess him. For he felt responsible. He should have foreseen such a possibility. Instead, he had acted rashly, on the spur of the moment, with only one thought in mind. To find Sando Trane before Mech-an did. And all the while Mech-an had had Sando Trane. And he had been anticipating their plans with a masterful strategy. Grudging respect forced its way through Lang as he stared at the aged features of the man.

"My men will not die easily!" the girl said, with a tremor.

And Mech-an laughed again.

"You may rest assured that even now they are dying. The fact that the sono-controller was destroyed is evidence enough."

**M**ECH-AN turned his attention away from the girl then and stared from Lang to Jeb Harrow.

"So these are the two intrepid outsiders who thought to solve the secret of the Dark Shield."

It was Jeb Harrow who spoke, his voice flat, but without fear.

"It would seem that we have."

Mech-an inclined his head in a short nod.

"True. True. But all it will avail you is the same fate you narrowly missed in space. Until now it has been the law of Mechnol that no outsider shall ever set foot on our planet and live."

There was a contradiction in Mech-an's words that Lang didn't miss. He had sealed their death warrant with an ancient law, and in the same breath said that it was to be broken. Lang's eyes switched to the side of the dais where Sando Trane stood in front of his crew, smiling and stroking his beard with a casual hand.

As Lang looked at him, Trane moved forward through the ranks of the guards and stopped a short distance away.

"We finally meet again, Lang. And this time it's really a pleasure to see you. And you, Harrow. I've always had a soft spot in my heart for the both of you. I vowed that someday I'd have you in my hands and pay you back for what you did to me on Mars."

Trane spoke with a great confidence. Too much confidence, Lang thought. It was obvious that the man had no fear of Mech-an. And that told Lang what he wanted to know. There was a bond between the two men. And from the look on Trane's bearded features, it was plain to see that it met with his satisfaction.

"You've been able to evade the patrol so far, Trane," Lang's voice was edged, "but if you leave this planet you'll be caught. The Council will be keeping a close watch on the Blind Spot for our ship. Any ship that leaves it will be under surveillance."

Trane laughed. Long and loudly. And when he had finished the smile faded from his face. His voice was a sneer when he spoke.

"When I leave Mechnol, it will be the Solar Patrol that will be at my mercy. You see, Lang, there's something you don't know yet."

As he said the words, Trane cast a quick glance up at the throne. Lang was cognizant of a shrug from Mech-an. And then Trane went on.

"There isn't any harm in telling you what our plans are, Lang. As a matter of fact, I'll enjoy telling you."

"I'm fully aware of what the past history of Mechnol is. And I'm also aware of the responsibility Mech-an has had in his hands, to carry out the law of the founders of this world."

"But fortunately, Mech-an is a man with progressive views. After our first talk together he realized that he held in his hands a weapon that could make him not only ruler of Mechnol, but of the entire solar system as well. Do you follow me?"

Lang followed him all too well. And a bitter dread was forming inside him as Trane's words cut mockingly.

But it was then that Mech-an interrupted Sando Trane.

"What is to be said, I will say. It is true that the law of the ancients banned outside worlds forever from Mechnol. For we here on this planet have never believed in war for the sake of war. But Trane has opened my eyes to great possibilities. If I remove the Shield, and install it in a fleet of space ships, it will be an invincible armada that will sweep across the system. I will then rule over many worlds instead of one, and the people of Mechnol will profit from the fruits of our conquest.

"It is an ironic twist of fate that at this moment I have the same views as Norla and Gurrid have been fighting me for. They wanted to remove the Shield and rejoin the planetary family. I am now going to do that—but for reasons that are much greater!"

It was Norla who stepped forward, her voice shaking with anger.

"The people will never allow you to do this! You are a traitor to Mechnol—to the ancients whose robe you wear!"

A HIGH-PITCHED feminine laughter greeted Norla's words. And Lang's eyes fastened on the figure of Orna. She was leaning forward, her eyes blazing at the girl below her.

"You fool! The people will do as my father says! Do you forget that he is ruler of Mechnol? That the City of Machines is not your rebel cave in the mountains? It is too bad that your brother did not see reason years ago and leave you to your insane dreams. You see what they have brought you."

Lang noted the pointed reference

to Gurrid in Orna's words. And he frowned. There was something hidden in them.

But his thoughts were interrupted by Sando Trane. The Earthman was facing Mech-an, a half smile on his face.

"Now that we've given them the facts, isn't it time that we carry out our original plan? And remember, you promised to let me personally dispose of Lang and Harrow in the Dark Shield."

Trane's words came as a stunning shock to Lang. For the moment he had forgotten the threat of death that Mech-an had cast at them earlier. Now it was back, and ominously imminent. It was the moment Sando Trane had spoken of, the time when he and Jeb Harrow would be in his hands to pay back for thwarting his plans on Mars.

Mech-an's features were cold.

"It is time. And I will keep my word. You may watch as I dispose of Norla and Gurrid in the black pillar. Then you may have the two Earthmen."

Almost as soon as Mech-an's voice completed the statement, the ranks of the guards began to close in. And Lang cast a single glance at Norla's face.

He saw a brief flicker of fear in her eyes, and then it was gone. There was only bitterness there now, and something else as she looked at him. A strange tenderness.

"I'm sorry, Burt...but I had wished..."

And one of the guards took her arm roughly. Lang felt his throat tighten and started to move to her side. But he was restrained by another guard who placed a sword point at his chest.

Lang shot a desperate look at Mech-an, and was about to plead with him for the girl's life, when he saw Orna leaning close to Mech-an and

whispering urgently into his ear.

A frown appeared on Mech-an's face as his daughter's words were relayed to him. But then slowly he nodded. And as Orna sat back, her features suddenly pale with a tense emotion, Mech-an raised his arm.

"Wait! My daughter has reminded me that we have not as yet received our report from the hills. It would be better if we wait until then. As long as our hostages are alive, we can make use of them to eliminate any remaining resistance. It will only be a delay of a few hours at most, but Orna is right."

Lang felt his breath leave his lungs heavily. He knew somehow, that Orna had delayed their execution in the black pillar for a reason. But what it was he couldn't ascertain. He heard Mech-an giving an order to the guards over the objection of Sando Trane.

"I have said what will be done! Take them to the upper cells. And see that they are well guarded."

The armed men closed about them then, and Lang felt himself shoved forward by a sword in his back.

As they were marched away he saw the angry features of Sando Trane staring at him.

But Lang couldn't feel happy about that. It only meant that Trane's pleasure would be delayed. His feet were heavy as he walked. And the deep vibration of the black pillar was a throbbing peril in his ears.

**T**HE ONLY light in the cell came from a narrow barred window and the metal corridor outside.

Lang stood, his back to one wall, facing the others. He could see them vaguely in the dimness, and the silence continued.

Ever since the door had slid shut, sealing them in the narrow confines, they had remained silent, each im-

mersed in his own thoughts. Lang wasn't sure, but he felt that nearly a half an hour had already crept by them.

And during that time one question had risen in his mind over all others. Why had Orna saved them at that moment? He remembered again the way Gurrid had spoken her name when they first approached the throne. And the look she had given him.

He stared over at Gurrid. Norla's brother was staring moodily at the floor of the cell, his broad shoulders leaning against the wall.

"Gurrid," Lang spoke suddenly, his voice sounding strange in the tense quiet.

Gurrid looked up at him without replying.

"When we first approached the dais I heard you whisper Orna's name. And I got the impression—"

Norla moved suddenly beside Lang and her fingers touched his arm lightly.

"I know what you are about to say, Burt, and I would like to explain for Gurrid."

She halted for a moment and glanced at her brother. There was a wistfulness in her eyes as she stared back at Lang.

"—It is something that Gurrid and I never talk about. You see, at one time Gurrid was in love with Orna. She offered him a high place in the ranks of her father if he would desert our cause. He refused, knowing that his love for her had been a false thing, and that she was as wicked as Mech-an, her father.

"Now Orna saved our lives—for she still loves Gurrid. Not as another woman might love a man. For her love is something evil, it kills... what her reason was, I do not know..."

"I see..." Lang looked over at Gurrid with compassion. He knew

what torment the man must have gone through. It was not an easy thing to be in love with a beautiful woman like Orna and know that her love must be shunned like a dark plague. A deep respect for Gurrid rose in Lang.

Gurrid cleared his throat suddenly in the silence that followed. When he spoke, his voice was gruff with frustration.

"If I could just get my hands around Mech-an's throat before I die... I would make him pay for my father's death."

And Lang knew by his words that the torment in Gurrid was deep. For Mech-an had killed his father, and Orna had asked him to forget the past and join her and Mech-an. It was a sore wound that Lang knew would never heal in Gurrid's heart.

Beside Lang, Jeb Harrow sighed.

"I never thought it would end like this, Burt. We've failed in the biggest job of our lives..."

**L**ANG COULD only bite his lip grimly. For Jeb was right. Bitterly right. The people of Earth and the other planets couldn't possibly know the peril that faced them. And even if they had known, they would be powerless to prevent it. The terrible force of the black beam was an invincible weapon. A weapon that would cut a swath of destruction through the planets and leave a rubble over which Mech-an would rule. And Sando Trane would reap his harvest at last.

He felt the girl tense as her fingers tightened suddenly on his arm.

He looked at her and saw that she was staring at the door, listening.

And then he heard it. Low voices from the corridor, still distant.

There was silence for a moment again and then the quick sound of approaching footsteps.

Lang steeled himself for the face

of the guard, the sliding back of the door, and the trip that would take them back to the black pillar...

But the face that appeared in the barred opening was not that of a guard.

"Orna!"

Lang heard the girl beside him breathe the name incredulously.

Orna's face was harshly cold as she stared in at them. Her eyes went from one to the other, and finally settled on Gurrid.

"I have come to offer you your life, Gurrid," she said. And though her voice was controlled, Lang caught the tremor of emotion that lay hidden in it.

"My life?" Gurrid's voice was toneless. "I will die as my father did. There will be no disgrace in that at least."

"Can't you forget the past? Must you harbor a grudge all your life? Your father was wrong—just as you were to refuse what we could give you. Now you must decide which it will be—I am offering you my love again, Gurrid, just as I did before. And I will save you..."

Gurrid moved closer to the door, his face inches from hers.

"And my sister? And the others? Will you save them too?"

She replied angrily, "I am not here to bargain! Norla and the others must pay the penalty of rebellion. They deserve to die—but you I offer life and all that I can give you..."

Gurrid's voice was harsh as he replied.

"Do you think I would accept such a bargain? And even if I did, what chance would you have of helping me escape? Your father would—"

"I have everything arranged," she interrupted him. "But time is of the essence. Even now my father is receiving word that the fight in the hills has ended, that your forces have



been crushed. They will be coming for you soon...

"But we can escape, just as I said. I have a sono-controller in Sando Trane's ship. We will be able to leave the city and take refuge in the hills until my father's anger subsides. He will accept you then, when he knows it is my wish..."

Lang watched Gurrid's face in the light that fell through the barred opening. And what he saw there amazed him in that moment. For Gurrid suddenly smiled.

"Very well, Orna, I will do it. I will go with you."

Norla ran forward and gripped her brother's arm.

"Gurrid! You don't know what you're saying! You can't do this—leave us to join *her!*"

Gurrid shook off Norla's restraining hand. And out in the corridor Orna laughed. And then she called out sharply:

"Guard!"

**A**S THE FOOTSTEPS of the guard approached there was only the soft sobbing of Norla as she backed away from her brother, her eyes wide with astonishment.

Then Lang saw the guard stop outside the cell and salute with his sword.

He heard Orna command him to open the door and let Gurrid accompany her to her father for an audience. He saw the guard hesitate a moment, but when she repeated the command, he operated the door's hidden controls and it swung back.

The guard stepped back, his sword held menacingly, and Gurrid stepped slowly through it. Lang watched him go with amazed eyes. And he heard Jeb Harrow breathe:

"I can't believe it...Not Gurrid..."

The same thought had crossed Lang's mind. But he had been too stunned to speak. He could only

stare at the broad back of Gurrid as he moved through the cell door and to freedom with Orna.

The laughter of Orna came again, taunting the others as she ordered the guard to lock the cell again.

And the guard, his sword hand wary, stepped close beside Gurrid to shut the door.

It was then that Gurrid moved. A hoarse curse left his lips and his right arm shot out.

His blow caught the guard high on the head, knocking him sideways against the wall. Before he could recover, Gurrid's left hand reached out and twisted the hilt of the sword from the guard's grasp.

Gurrid's next move was even swifter. His left hand twisted the sword and brought the point against the guard's throat. The man let out a single shriek of fear that became a spluttering gurgle as the point drove through his throat.

It was over in a matter of seconds. It had happened so fast that even Lang was stunned by Gurrid's sudden move. The guard slumped to the floor of the corridor, a red froth welling from his torn throat.

And Lang moved quickly from the cell, with Jeb Harrow and Norla beside him.

Gurrid had turned to face Orna. She was staring at him with eyes that were suddenly hate-filled.

"I offered you your freedom—your life!"

Gurrid grasped her arm roughly.

"And now I'm offering you yours. We're going to the ship just as you said—but not just the two of us! Did you think I would leave my sister and friends to die like my father did?"

He shoved her ahead of him down the corridor, and Lang took Norla's arm gently, following.

Orna was struggling to get away from Gurrid's grasp, but he held her tightly with his free hand. He called



back over his shoulder:

"We've got to get to the ship before our escape is discovered. But Mech-an won't dare kill us as long as we have Orna!"

And Lang caught the note of triumph in Gurrid's voice. Beside Lang, Norla's breath became a soft sob. When he looked at her he saw that there were tears in her eyes. But they were tears of joy now. Gurrid had done the only possible thing that could have saved them.

**T**HEY MOVED rapidly through the corridor and began the long ascent to the roof. Lang remembered vaguely that they had come this way before.

And suddenly behind them a shout arose.

"They've found the guard and the cell!" Jeb Harrow said. "We don't have much time."

Gurrid urged Orna forward faster up the stairs. And behind them, Lang heard the sharp clatter of running feet in pursuit.

Then suddenly the opening to the roof loomed over their head.

And then they were on the smooth metal surface, running toward the ships.

Lang could feel the tremoring vibration of the black pillar at his back as he ran. And a fear coursed through him that they would be too late. If Mech-an was warned before they could take off. . . .

Gurrid suddenly turned his head and shouted.

"Take Norla and use your own ship! I will take Orna in Sando Trane's ship—hurry!"

Norla broke away from Lang then and tried to catch up with Gurrid.

"There is no sono—controller in Burt's ship—we'll have to go together!"

"Do as I say! Leave—quickly! I have a score to settle with Mech-an!"

And Gurrid's features were suddenly convulsed into something terrible. Norla hesitated as she saw his face, and it was time enough for Lang to reach her and grasp her arm. He didn't know what plan Gurrid had, but the look on his face told him enough.

"We'd better do as Gurrid says, Norla. Jeb!" he shouted at Jeb and pointed to their own ship.

But Harrow was already running for the airlock. And as Lang pulled the girl along with him he heard sharp shouts from behind them.

He cast a single glance over his shoulder as he reached the airlock of the ship and helped the girl inside. He saw a group of guards and Sando Trane burst from the opening in the roof and run toward them. There was a proton gun in Trane's hand, and even as Lang jumped through the airlock and swung the port closed he heard the explosion of Trane's gun.

There was a sharp crack as the charge hit the side of the ship, but the metal was too tough for the light weapon to penetrate. Then Lang was moving the girl forward into the control room.

But Jeb Harrow was already at the controls.

There was a blast of sound as the ship came to life, and as Lang stared into the visiplat and saw the roof recede from the ship, he heard Jeb shout:

"Gurrid's taken off!"

Lang saw it then. The slim space ship of Sando Trane had shot from the surface of the roof and was moving in a sharp arc away from them.

"He's turning away!" Norla sobbed. "He isn't following us!"

And Lang saw why. His throat tightened as he saw a long tendril of black energy leap out from the main pillar straight toward them. And a sickening dread swept over him. They had no sono-controller to ward

that finger of death off. The dread tentacle would reach them in a moment, and then...

Bitterly he knew that Mech-an had won. That Sando Trane would be standing on the roof staring after them, laughing in the knowledge that they were doomed.

But in that instant he saw the ship that Gurrid flew suddenly arc back toward the roof, toward the pillar of blackness that swept into the sky.

And from the nose of the ship a shaft of radiance sped. It knifed into the blackness and cut a wide swath.

**I**N THE SAME instant Gurrid nosed the ship down in a sharp dive. And Lang knew what Gurrid was going to do.

The sono-controller would protect him from the black ray as he hurtled the ship into the maw of the great Mech far below. As he drove the monster ship of space into that machine and—

It happened even as he thought of it.

The ship sped into the maw of blackness, the radiance of the sono-controller cutting a swath of protection ahead of it.

And suddenly the world seemed to erupt in a blazing inferno.

There was an explosion that rocked the ship, sending it hurtling high into the heavens. And a sheet of flame shot more than a mile into the air.

And when it faded into a whirling pool of smoke and vapor, the black pillar had vanished. The Dark Shield had been destroyed.

Lang stared with awed eyes at the scene below them. Where the palace of Mech-an had been there was nothing but a black gaping hole. The great Mech that had thrown the Dark Shield around the planet for countless years was a smoldering rubble.

Lang felt a shudder pass through

him as he looked at the carnage Gurrid's death plunge had caused. Then he felt Norla weeping beside him.

He turned to her and put his arm about her shoulders tenderly. Her eyes were tear-filled with shocked horror.

"Gurrid... Oh, Gurrid—why\* did you do it..."

Lang knew why. He told her softly.

"He had to, Norla. He did the bravest thing a man could have done. The Dark Shield had to be destroyed and Mech-an along with it. It was his life or the destruction of the whole system." His voice held a tremor then. "Besides, Gurrid had another reason. He remembered how his father had died..."

And Lang's voice trailed off. For he was thinking that it went even deeper than that. Gurrid had taken the woman he loved to death with him. For only in death could he be united with her. For in death, evil would be cleansed...

The girl stirred in his arms and her chin lifted as she wiped the tears from her eyes.

"I—I'm very proud of him... But what of Mechnol... the people of our world..."

He pointed to the visiplat in answer. And her eyes widened as she stared into a sky that was a brilliant blanket of stars. Off to the left loomed the great bulk of Saturn, its surface a hazy radiance of light that filled the sky.

"The people of Mechnol will learn to live with others of their kind, Norla. Your dream has been fulfilled. Soon there will be ships from Earth here, and we will help cement the friendship of our worlds."

Lang's voice trailed off and he looked over at Jeb Harrow.

"We've closed our case with Sando Trane, Burt," Jeb said.

Lang nodded and felt the girl's body press close to him.

He looked at her face as she stared in awe at the open heavens above them. At the stars that spread their emerald blanket over Mechnol.

"You will help me learn the ways of your world, Burt?..."

"I will stay with you here on Mechnol, Norla—always."

And Jeb Harrow turned away as their lips met tenderly.

## MALAYAN SUPERSTITIONS



By H. R. STANTON



**M**ALAYANS who are out searching for camphor eat their food dry and take special care not to pound their salt too fine. This is because camphor is found in crystal form in the crevices in the trunks of camphor trees. It seems to the superstitious Malay, that if he were to eat pulverized salt, he would find his camphor in small grains, where as if he left his salt coarse, he would find the camphor crystals large.

The hunter of Borneo use one single leathery leaf as a plate all the time they are away on a camphor hunt. They feel that if they should wash this plate or even rinse it off a bit, the camphor might dissolve and disappear from the cracks in the trees. These instances are good examples of imitative or similar magic that is still practiced in the more remote corners of the world.

Many superstitious tribes of the Sarawak

are firmly convinced that if the wives of the tribe were to commit adultery while their husbands were out in the jungle searching for camphor, the camphor that they might find would evaporate before their eyes. Husbands could tell by the way the knots grew in the trees if their wives were faithful or not. Many poor innocent women have been killed on no stronger evidence than these knots by their foolishly jealous husbands. Another taboo practiced by the women, is that they will not comb their hair all the time their husbands are away collecting the camphor. They compare their combs and the spaces between the teeth to the crevices of the camphor trees, and if they were to comb their hair, these crevices would be empty of the precious crystals as are the spaces between the teeth of a comb.

\* \* \*

## NEW PHOTO ART



By WILLIAM KARNEY



**A**S IN ALL modern living, gadgets are being stream-lined from the standpoint of simplicity and functionalism. For at least a hundred years, ever since the invention of photography, aficionados of the activity have been howling for inventors to do away with the cumbersome chemical methods of photography. "Give us a camera which will immediately produce a positive print," they've cried.

Well they've gotten their wish at last, and photography is about to get another shot in the arm. Newspapers have been full of advertisements for a camera which now photographs directly. *You put in a spool of film and take out a spool of prints.* And within the camera itself, unlike some previous inventions in this field, there are no complicated tanks or chemical baths. The chemistry of the new system is entirely buried in the film itself. Nor is the camera an impossible monstrosity. It appears to be of conventional size and the quality of its work is good. Many people who have been disinterested in amateur photographic

work because of the bother connected with having negatives developed and prints reproduced, will take to this new tool with great interest. Now if you want to preserve an event you merely point the camera at it, and a minute later remove from the camera a finished positive print! What a boon!

The core of the invention naturally lies in the film which is capable of doing all this and we shall undoubtedly see numerous applications of the method to other fields. Even in scientific photographic work, there has always been a great need for such "instantaneous" photography.

From first appearances, the camera appears not to be too cheap. On the other hand it is not impossibly expensive—ranging in price so far as can be seen, between seventy-five and one hundred dollars, including some associated equipment like flash units and so on.

About all that's left now for science to invent and thus to satisfy everyone, is a good five cent cigar!

# PLANET of the DEAD



## By ROG PHILLIPS

**A strange thing happened to Jerub that day; it seemed that somehow his body had died — and yet he knew he still lived!**

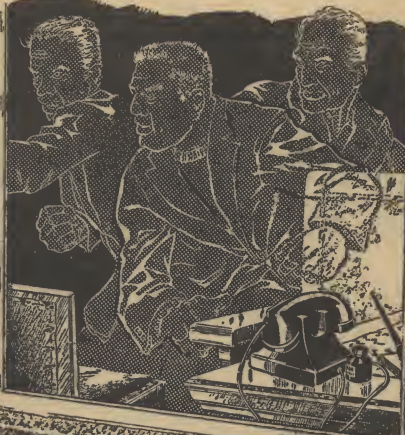
**"I**T'S LITTLE things." Jerub let that sentence emerge into consciousness with slow bitterness. "Little things."

It had always been the little things that had made life a sequence of nightmarish failures. His name, for instance. His mother had been what she herself liked to call an inspirationist. The name, Jerub, had flashed into her mind when she came out of the ether after he was born. So he

had been named Jerub. Before he was old enough to say mama it had been changed to "mama's little Cherub."

With a wry grin Jerub forced the past out of his mind and concentrated on the present. The "little" thing that was troubling him now.

It was an interoffice memo with a short note scribbled in the boss' hasty scrawl. The memo read, "Criminal carelessness in tagging results will not be tolerated. There have been



He dove through the window, leaving his other self behind to ward off the X-men . . .

several errors lately in our reports resulting solely from carelessness of physicists in labelling X-ray spectrograph films. Please watch this."

The note ended, "This means you, Jerub. Don't let it happen again."

He had never made an error of that sort in his life and he knew it. Yet undoubtedly the labels had been wrong. How had it happened? Was someone trying to "get" him?

Jerub thought over the ways this might have been done. There just weren't any. The number tag was photographed into the film when the spectrograph was taken. It was always the same number that was stamped into the sample, and he could read, unless he was losing his mind.

The sample came from the shop where it was cut to fit in place in the tube. Along with it came the report sheet for that individual sample. He handled them in order and never mixed them up. His daily sheet also carried the reports.

When the sample and the film left him the film went to the developing room. No tampering was possible there. Logic compelled him to conclude that it must be he himself who had made the errors. He must have been numbering for one sample and using a different one some of the time. Yet how could he? He couldn't and that was that.

Since he couldn't, then someone must be sabotaging his job for him. How? Perhaps that wasn't as vital as *who*. If he could decide who it might be, then he might be able to find out *how* it was done.

A face and a name came into his mind unbidden. Perry Lauer who had always been just one step behind him in the climb up the ladder of success in their field. Perry Lauer, who carefully hid his resentment each time he, Jerub, got the next advancement, leaving his old position for Perry

to step into.

If Perry could break that run, get an advancement one step ahead of him, then he would hold it, and from then on, right up to the top of the ladder he would be out in front. Sooner or later old man Meade, the Chief, would die. Then it would probably be he or Perry who got that job. They both knew that, and they both knew that unless something happened it would be Jerub.

A FROWN furrowed Jerub's forehead. Up until now the thought of Perry doing anything underhanded had never occurred to him. If it weren't for this business of unaccountably switched numbers he would have sworn such a trait was nonexistent in Perry. Jealous he might be at times. Never vicious or underhanded.

There was no one else though, And when an X-ray spectrum of a sample of Iridium turns out to be from Copper, and Copper of Silicon, well, either he was crazy or Perry had figured out a scheme to discredit him. He would keep quiet, though, until he had the proof.

He dropped the memo in the waste basket and began his day's work. His lab was the corner room on the second floor of the research building, overlooking the huge industrial machine of Grant-Peeble. Three-thousand eight-hundred and forty different alloys of metals were used in the products of the huge factories of Grant-Peeble. They had to be just so. To keep them that way every batch had to be sampled and the samples analyzed in the X-ray generator.

It was important work. A variation of a small fraction in any of the properties of each alloy might mean failure of a product with loss of life. For Grant-Peeble had the monopoly on all sorts of key instruments and



mechanisms in the highly specialized manufacturing of the twenty-first century.

With the final ending of the Sherman Anti-trust Law in 1899 to be supplanted by federal inspection and control of industry, the giants had sprung up. Although Grant-Peeble was not the biggest, it was one of the most vital. And its continued existence depended on a clean record. Failure of any product at any time would bring on an investigation with charges of cheapening products.

If such charges were made to stick it would mean the end of Grant-Peeble as it had many other firms just as big. So carelessness or apparent carelessness in tagging X-ray films was a very serious thing.

Jerub knew that old man Meade was being very charitable in not throwing him to the wolves at once. He undoubtedly could. He could certainly prove his case before the civil service board or he would never have dared to put that written remark on the memo.

**THE TRAY** with the morning samples came in. Gleaming rows of polished metal, identical in shape to fit into the anode clamps, almost identical in color. His trained eyes recognized the samples to be of the Almy five series, whose aging properties varied hypercritically with the mixture.

He stared at the tray disconsolately. If he made a single mistake on this series he was done and he knew it. There was a sinking feeling in the pit of his stomach. He knew somehow, in some way he didn't understand, that there were going to be errors. The spectrograph for sample 606-34 would, on recheck for magnetic and physical characteristics, prove to be actually for 606-37 or some other sample. In the afternoon he would

hear the intercom call him to the old man's office, and that would be the end.

There was one thing he **COULD** do. He'd better do it.

He went to the phone and called photo. It took an hour of precious time to get things set up; but when he started on the tray of samples there was a satisfied gleam in his eye. His every move was being recorded on film. The film would bring out the numbers he placed on the films, the numbers of the samples as they went into the X-ray tube, and everything else.

No one knew about it except photo, and he had their promise it would be kept secret.

The morning wore on. It was ten minutes past lunch time when he finished the series and saw the stack of films and tray of samples on their way to the next stage. The roll of films that had recorded his every move went back to photo to be developed immediately after lunch. More film was in the camera for the afternoon run.

**HE WHISTLED** as he hurried down the stairs and out of the building. Crossing the blacktop to the office lunchroom, he craned his neck over the heads of the standing people. His eyes lit up as they came to rest on the figure of Betty standing in the line well up toward the cafeteria counters. She saw him at the same time and waved cheerfully.

He grinned ruefully, exaggerating his expression to convey his apology for being late. She nodded and formed the words, "The corner table."

He nodded, and settled into patient, slow steps as the line advanced. Ten minutes later he joined her at their usual table, setting his tray down with a sigh of relief.



"Sorry I was late," he said. "Some extra work delayed my run of samples. They had to be taken care of before lunch, so I had to stay."

She was a big girl. Bigger than he was. Yet there was a quickness and capableness about her that held him. She was merely one of several hundred stenographers in the main office, but at times he felt that she comprehended his own work too easily, grasped his problems too quickly. There were times when he told her of some technical problem, and he would have sworn she saw the answer, but refrained from telling it to him lest she disclose that she was no mere stenographer.

He felt that she loved him. Certainly she had eyes for no one but him, and there were any number of men far handsomer than he who would have welcomed her attention. He ate silently, watching her. How much did he know about her? Very little. She had been born in North Dakota on a farm, had gone to business school after high school, and then come to Grant-Peeble six months ago.

He, Jerub, had been born in Oklahoma City, gone to the University of Illinois, and won a G-P scholarship. After his doctor's degree he had gone straight into the research labs of the company. He had been here two years now.

"There's no way *she* could be doing it," he thought. The thought startled him out of his composure. He had been suspecting even Betty. He hastily reviewed his thoughts while he had been eating. One question stood out above all the others.

How could Betty be so understanding of the technical details of his field if she were only a stenographer with a high school education?

The answer was obvious, of course. She herself had confessed

getting books at the library and reading up on it so that she could have something to talk with him about.

It was also obvious that this business had him really keyed up. Yet, he decided to tell her nothing about it at all. It would be the first thing he had kept secret from her since he had first met her five months ago. After all, though, it might worry her, and it would be time enough to tell her when it was all straightened out.

So instead of unburdening himself as he had looked forward to doing, he concentrated his conversation on the play they were going to see that night after dinner. Several times during the conversation she gave him an analytical look. He knew that she suspected something was troubling him. But she said nothing.

**I**T WAS early the next morning when the dreaded call came for him to go to the old man's office. Before going he checked with photo to make sure the reel of films was ready for showing. Then he left his lab and went down the hall.

Meade was sitting behind his huge desk, his slight figure made to seem slighter by the size of the desk.

"Sit down, Jerry," he growled when Jerub entered.

Jerub sat down in a chair at the corner of the desk and waited for what he knew was coming.

"The magnetic run on the samples shows that you mixed them up more than even the others," Meade said in a low voice, his eyes glued to the paper in his hand. "We ran a duplicate test in Perry's X-ray room. His run agreed with the magnetic run."

With a sour expression Meade shoved the paper to the middle of the desk.

"There's only one answer, Jerry," he said. "You are deliberately gum-

ming up your work for some reason. Is it that you want to break your contract? Why? It would be professional suicide."

Jerub's voice was angry.

"Something is going on that I don't understand at all," he said. "But I can prove I didn't make a single error in the run."

"You can?" Meade exclaimed. "How?"

"My every move during that run is recorded," Jerub answered. "Even the numbers on the samples as I put them in place is recorded. If I mixed them up the film will prove it. If I didn't, the film will prove I didn't."

"Let's look at that film," Meade said emotionlessly. "At least the fact that you had it made is in your favor."

Two phone calls fixed things up for a run of the film.

"You go back to work, Jerry," Meade said. "Keep a camera check today too. I want to see this in slow motion with a couple of witnesses. I'll let you know the results. I'm convinced now that if the fault lies with you, and it must, the fault is psychological. If we can find where your subconscious played tricks on you, showing you those sections of the film will probably enable you to overcome the difficulty."

He looked at Jerub with his normal sad friendliness.

"Sorry I thought you might be up to something," he said gruffly.

"It's quite all right," Jerub murmured vaguely, turning quickly so that his superior wouldn't see the dawning look of self-distrust that was being born on his face.

IT WAS nearly four in the afternoon when Meade and two strangers came into Jerub's lab unannounced. Jerub was intent on his work and didn't hear them come in.

He looked up to see them standing there silently, looking at him. One of the strangers was chewing on a cigar.

His knees suddenly became weak.

He flashed them a nervous smile and said, "Sit down somewhere, gentlemen. I'll be through here in a minute."

Aside from the man with the cigar giving it a single, more violent jerk, they made no answer.

Near panic, Jerub managed to complete the work he was on without a fumble. There was dampness on his forehead when he stepped back from the bench and fumbled at the knot to his apron and slipped it over his head.

He turned his back on them as he hung the apron over a hook and took his suit coat from the one next to it. He kept his back turned as he put it on. Then, squaring his shoulders, he turned ready for what might come.

"This is Mr. Carty, Jerry Conners," Meade performed introductions tonelessly. "And Mr. Forr."

Jerub's damp palm was grasped by each of the two men and pumped slowly, then dropped.

"I called them in to be witnesses on the film," Meade explained. "They're from the government inspection police. I want you to work with them, Jerry. Something's going on that can't be explained yet. The film proves you didn't make a single mistake."

Mr. Carty, the man with the cigar, cleared his throat.

"The pictures prove you're in the clear, Conners," he said. "We're going to put a camera on every step. You were a smart boy to think of the camera check."

Meade was shaking his head in bewilderment.

"The only logical answer," he said, "is to say that a piece of metal can

have one X-ray spectrum at one time and another at another time. That's impossible. If we go by the apparent record of your 'mistakes', we have to draw the conclusion that copper can have the X-ray band of iron, and other impossible conclusions like that."

"Now don't let it get you down," Carty chuckled. "Whatever the answer, we'll find it. We'll get experts in here to tear the whole setup apart. We'll find the trouble. Don't worry."

Jerub had been opening and closing his mouth like a fish. Now he managed to speak.

"Then I am cleared?" he asked.

"Yes, Jerry," Meade said with a smile. "Not only cleared. You go up about ten notches on the civil service rating for this. If something new to science comes out of this my job won't be the top of the ladder for you."

"Through for the day?" Forr asked.

Jerub nodded.

"O.K.," Forr said. "Tomorrow morning there'll be a bunch of government scientists here. Just follow their orders and cooperate with them. That's all you have to do."

With a final, curious look around the lab the two government men turned and left.

Meade remained. When the others had gone he held out his hand. Jerub took it wordlessly and shook it. Then, with a queer smile on his face Meade turned and left.

**T**HAT NIGHT when Jerub called on Betty he told her all about it. She listened with a strange expression growing on her face.

"Why didn't you tell me about all this before?" she finally asked.

"Well," Jerub said uncomfortably.

"I, I didn't want to worry you."

"I see," Betty's voice was cold vel-

vet. "You suspected me. I can understand though. You were faced with something beyond comprehension, outside of logic. Your logical mind began to exhaust every possibility, even absurdities, in the hope of finding an answer. You decided secrecy was best."

"Please, Betty," Jerub said helplessly. "I was going to tell you just as soon as I found something tangible, and I have. At least Meade has, and the government is going to work on it. I'm in the clear now."

"Well," Betty smiled bitterly. "I might have expected it. I kept a secret from you, Jerub."

"You can have any secrets you want," Jerub said miserably. "Only don't be mad at me."

"I'm not mad at you," Betty said. "I'm just mad at myself. I kept a secret from you because I thought it might make a difference in your feelings toward me. May I keep that secret a bit longer, Jerub?"

"If you want to," he answered. "But nothing could make any difference in my feelings toward you."

"Nice," she purred contentedly. Her eyes caressed him momentarily, then she leaned forward and kissed him. But there was a cold maturity in her eyes which she hid from him. Deep within her blue irises glinted the steel of a rising anger. When Jerub left, that anger came out into full strength.

She strode to the phone and dialled a number, her fingers twirling the dial rapidly.

There was a single buzz in the ear-piece as a bell rang at the other end. A mechanical voice spoke tonelessly.

"Central exchange. Number please."

"Oh-three-four," she said. There was a wait.

"Allo?" The voice bounced out of the receiver, carrying its sardonic

tone of superior humor with it.

Betty winced. There was urgency in her voice as she rapidly told the party at the other end all that Jerub had said to her.

"And pfwhat shuld I be a doin'?" the voice asked.

"Get to work on it," Betty ordered.

"Yiss pliss," the voice hissed in an imitation of its conception of a Japanese talking American. "Ay tank ay bane get to work pritty quick py golly. Cherio, ol' gal." The click in the receiver told her he had hung up.

She chuckled. "The silly oaf," she thought. "But he is capable and loyal, and loyalty is hard to replace these days."

CARTY AND Forr played the recording back slowly to get the number of clicks in dialling. Then they swiftly looked up the address after the telephone number Betty had called. Carty's black cigar lifted in surprise as his eyes read the address. He and Forr looked at each other with wide eyes.

It was an unlisted number in the diplomatic file, and belonged to the private office of Gregor Palovitch, a Soviet permanent member of the U. N. resident staff. He was from White Russia. In fact, that was where he was now, on vacation.

The cigar gave another lift. Forr nodded, and the two men left the telephone exchange with a set of grim earnestness to their shoulders.

An hour later they followed a skinny man into a large office building across from the Peebleton post office. The skinny man carried a heavy suitcase which the two heavier men made no offer to carry for him.

"Sure you can do it?" Carty demanded. "If you slip up this will bring a U.N. investigation. That would mean international business."

The skinny man shrugged philo-

sophically.

"Don't build it up," he snarled with a sudden change of manner. "For two cents I'd gum it up just to see you squirm."

"Calm down, Blue," Carty said tolerantly. "You know we love you."

"Oh sure," the skinny man said. "Like your mother. I know. Think they'll ever pin her murder on you, Carty?"

"I've already confessed and the Big Boy pardoned me," Carty said with a chuckle.

The elevator took them up to the seventeenth floor. A skeleton key let them into an office. There were doors. Inner offices. One of them had the name GREGOR PALOVITCH on it.

The skinny man that Carty had called Blue became suddenly and efficiently industrious. He laid his suitcase on the floor and opened it. From its interior came a strange instrument. He ran this slowly over the door, making marks with chalk.

He worked on the walls too. He worked for a solid hour. Then he sat down and smoked a cigarette as if there was nothing in the world to do except smoke.

Carty and Forr stood in the center of the reception room, not making a sound. Aside from the cigar in Carty's face, which glowed occasionally, they might have been statues.

When Blue started in again there was definite purpose in his actions.

Tools came out of the suitcase. He stripped wood off the door frame carefully. He took wire and tried it out with instruments. Then he inserted the wire in the cracks of the door frame at certain places.

When that was done he began to take the panel out of the door itself. His fingers flew. The panel came out in ten minutes, revealing the room on the other side of the

door.

He lit another cigarette and surveyed the dark room. A strip of plastic mesh came from the suitcase. He stuck that into the room exploratively. It glowed at spots about six inches apart all the way from the floor to the top of the door.

Blue clucked disgustedly. Half an hour later he had substitute black lights rigged up and playing on some of the selenium cells. He had to work with a mirror because he couldn't stick his head in far enough to see around the corner of the door frame.

It only took a few minutes after that to clear the traps. He nodded coldly to Carty and Forr when he had finished. They stepped through the panel opening of the door.

Blue began the business of preparing to get out without leaving any trace of their visit.

Carty and Forr looked around warily. On a table against one wall was the phone. It was the standard combination robot message phone with one difference. There were two wires leading from it to two coils set in brackets on the table.

Blue paused to look at the setup.

"Just ordinary air core coils," he said. "No sense to them." He turned back to his work.

Forr took out a minicam and snapped a few pictures from various angles, pocketing the cartridge size flash bulbs as they were used.

It was dawn when the three men left the building. When Gregor Palovitch returned from his vacation he would find no trace of the illegal visit of two government men and one lifer who, because of his incredible skill in solving perfect burglar alarm systems had been pensioned to the government on the q.t.

**J**ERUB, STILL slightly awed after three weeks, watched Hinton Don-

ory, the world's greatest scientist, go through the motions of his own routine with the samples for X-ray analysis.

The tube, in fact the whole setup, was fresh from the factory. It was the tenth one that had been installed since the government scientists took over.

Jerub had not been allowed to take part in the work, though he had been told to stand by in a consultative capacity. For three weeks he had watched Donory and other great men do his work for him. For three weeks they had obtained the same unaccountable, impossible results that he had.

A pattern had been building up in his mind. A pattern that the others apparently didn't see, so immersed in details were they. He had first caught a glimmering of that pattern three days before, but had hesitated, waiting to be sure before voicing it.

He was sure now.

Hinton Donory straightened up from the last of the samples. They again rested in a tray in neat rows, but now ready to be wheeled into the magnetic lab.

"Well, that's that," Donory said with a tired smile. "I wonder what the results will be today?"

"I think I can tell you, sir," Jerub said. "At least I feel sure of the first half dozen or so exchanges."

Donory gave him a keen, piercing look.

"Suppose you write down on a slip of paper what you think the results will be," he suggested.

Jerub went to his desk and the report sheet. After the number of each sample he suspected he placed a question mark.

Hinton Donory watched over his shoulder. The order of the question marks seemed senseless. If there were some pattern to this it certain-

ly wasn't an obvious one.

Jerub finished the list.

"I'm only positive of the first half of the list," he said as he handed it to Donory. "I had to guess at the last part, but I think my guess is correct."

"We'll see," Donory said, taking the marked list.

Government men were wheeling the trays of samples and films out of the lab.

ONE FACT had been established with complete certainty by the scientists. That was that in spite of all established theory, the X-ray spectrum of a metal wasn't absolutely associated with it. On their records, copper had changed its X-ray spectrum to that of iron, then aluminum, then manganese, then several different alloys, then back to copper again.

Some great new scientific discovery was about to be made. Perhaps it might change the whole picture of basic theory.

Another fact had been proven. It was not the machine, but the room that was at the heart of the matter. The same sample run in some other laboratory came out perfect. The same run, repeated time after time in this lab invariably gave different results.

A third fact had been determined. The visible spectrum never varied. Neither did the absorption spectrum for the visible bands. Only the X-ray spectrum varied.

A copper sample had yielded a copper spectrum in the visible bands immediately before and after yielding an X-ray spectrum of manganese steel.

And finally, a fourth fact had been established. No matter how senseless the variations were, no X-ray spectrum appeared in the tray of samples that did not have a sample that *should* have yielded that spectrum also in the

tray.

No place else in the world had such a phenomena existed! And Jerub thought he had solved the pattern. If he had—His mind refused to think of the implications contained in the strange phenomena if his solution to the problem were correct.

HE AND DONORY left the lab and went to the photo office where the results of the developed negatives would be checked. Jerub sat and smoked one cigarette after another, waiting impatiently for the racks of negatives to be wheeled into the room.

He wasn't afraid of the results. After all, in his mind he had gone through the same thing the day before and proved it to himself. He was just impatient. He wanted others to share it with him.

If what he thought was true, there was grave danger to not only him, but the whole United States!

The technician began on the prints as soon as they came in. He took the first one in order on the racks and placed it over a lighted ground glass mount. Glancing at it he classified its type and picked a standardized negative beside it to compare.

Then on a blank report sheet he wrote a number which was the catalogue number of that particular alloy. Silently he went through the routine on film after film.

Hinton Donory grunted in amazement as the result was put down for the sample in front of the first question mark Jerub had written.

An hour later the last film had been run. Donory turned to Jerub.

"You've solved it," he said simply.

Jerub opened his mouth. "Not a word," Donory said quickly, holding up his hand. "This must be said in a meeting, with every word recorded. Perhaps you don't realize it, but from

now on you will be classed as one of the great scientists in the world!

"Be ready to explain the whole thing at eight o'clock tonight," he continued. "Right now I must hurry to send notices of the meeting to several scientists I want to be present."

He glanced at his watch. It was already three in the afternoon.

"Eight o'clock," he repeated. "Downtown at the office of the government plant inspector."

He took Jerub's hand solemnly and shook it. Then he left.

Jerub watched him go with a mixture of feelings. Perhaps Donory thought him a great scientist; but he knew the truth. Or at least he thought he did. And if he was right there were scientists and a science so far beyond that of Donory and himself that it was more probable Donory would think differently about him in that respect after tonight's meeting.

There was nothing to do until five. The real routine of X-ray analysis had been switched to other labs in the building as soon as it was determined that the strange phenomena were confined to the one lab. No doubt Perry was working on the samples now.

Jerub wandered back to his lab. He glanced at the phone in indecision. Finally he lifted it from its cradle and dialed Betty's phone in the general office.

Her velvet voice purred into the receiver, sending little cramping feelings around his heart.

"Hello, Betty," he said. "Good news, I think. I've found the answer, or at least the essential part of it."

"You have?" she exclaimed. "Oh that's wonderful. What does Mr. Donory think about it?"

"He doesn't know it yet," Jerub replied. "There's to be a meeting tonight at the inspector's office down-

town. I'm to explain the whole thing there."

"Oh?" Betty said. It came out almost as a croak. She cleared her throat loudly, then said, "I have to hang up now Jerub. I'll meet you after work. O.K.?"

"O.K, Betty," he said, dropping the phone lazily back in the cradle.

"**H**ERE'S BLUE, Mr. Donory," Carty said respectfully. "He can tell you what *he* thinks about that setup."

"Thank you Mr. Carty," Donory said, turning his eyes curiously on the skinny man called Blue. He had heard of him before. Many of the improvements in modern alarm systems were due to an all out effort to capture this fabulous criminal who seemed able to walk in and out of perfect traps of all descriptions.

He knew the man was an electronics genius. If it were not for the rigorous caste system imposed by the universal civil service method of job rating, this man, Blue, might have become one of the country's outstanding scientists.

In his youth he took to electronics as a duck takes to water. Instead of learning his school lessons he surrounded himself with condensers, selenium cells, and all the equipment of electronics.

He had never gone farther than grade school. For that reason he could never earn a living at his speciality. That is, in a regular job. He had turned his talents to defying the law.

Any one of the burglar alarm companies would have willingly paid fabulous prices for his talents, but civil service laws forbade them from hiring him.

It was only after he was caught, and the scientist who devised the trap that caught him was given the



U.N. medal for scientific achievement because of it, that he had found a niche in society as an undercover agent for the government.

There was a certain respect in Donory's voice as he stood up and walked around his desk to shake hands with Blue.

Blue noticed this. His defiant attitude melted under the subtle compliment of professional respect from the world's greatest scientist.

"I've seen the enlargements of the pictures of the phone setup," Donory said. "They don't seem to make any sense. Mr. Carty says that you said the same thing. But maybe you have some ideas about it that make sense to you by now, after three weeks. If you do I'd like to hear them, no matter how nonsensical they might seem."

He smiled humorlessly to himself.

"After all," he added, "I've seen some very impossible things happen lately. The very nonsensicality of this setup makes it seem possible it might tie in with some other things I've seen lately."

**B**LUE TOOK out a cigarette and lit it casually. He walked over to Donory's desk and sat on the edge of it with one foot on the floor.

"Well," he began cautiously. "It does make sense in one way. In the ordinary way of things it doesn't though. But since you seem willing to consider things not in the textbooks yet, it may be that you won't toss me out if I tell you what I think."

"I should say not," Donory said.

Blue grinned at him.

"O.K.," he said, flicking his cigarette in the ash tray. "Here we have a standard robot telephone. Its insides take up all the room under the cover. They're all essential, so, since the robot phone still works, we have

to think that those coils outside are just connected to part of the standard circuit. It's not likely that there's anything but the standard circuit under the cover. Right?"

"That's my conclusion too," Donory agreed.

"There's only one sensible connection that those coils could make with the circuit," Blue went on. "It must be connected in series with the wire recorder. That means that all the coils do is set up a fluctuating magnetic field whose fluctuations agree with the voice current."

"That's correct," Donory said quietly.

"The robot is thoroughly shielded," Blue continued. "So I asked myself how far the magnetic field would extend. By that, of course, I mean how far away it could be picked up by some sort of magnetic detector without distortion. I decided it could extend maybe fifty feet with the right sort of pickup. But there was only one drawback to that idea."

"What was that?" Donory asked.

"According to what Carty here says," Blue said, "some voice spoke over the telephone from that end in reply to the voice of the girl. Now those coils couldn't pick up a magnetic field and throw its fluctuations into the phone unless that field were from coils right next to them—unless—"

"Unless what?" Donory asked.

"Unless maybe the coils are just a blind, and there are connections from them to fine wires imbedded in the table. I didn't think of that when we were up there or I could have looked with my small metalscope. It would detect even a sixty wire through an inch of wood. It would detect a metal paint line under the surface paint. With all the gadgets in that office I wouldn't be sur-

prised if those coils weren't set up as a blind, and fine wires lead from those coils to a hidden setup in the next room. There could be a robot exchange in the next room that could send that call the girl made from that phone to any place in the city. It would be a nice setup. A secret organization would use an unlisted, diplomatically immune telephone as a central exchange. The robot exchange connected to the phone in the next office could have a code setup so that some simple number could be spoken, and the robot exchange would connect to some phone. That way there would be no possibility to trace the call to the phone without tapping the outgoing phone line too."

"I believe you must be right," Donory replied. "Mr. Carty, suppose you tap all the phones near that one. Maybe you'll get results."

Carty carefully knocked the ashes from his cigar into the ash tray on the desk before replying.

"I hate to knock your theories for a loop," he said in a tone of voice that let them know he was thoroughly enjoying doing it in reality. "But my department has had all those phones tapped through the central exchange since they were first installed. We have two hundred phones in that building tapped to recorders. And when that girl made that call not a phone in that bunch showed any life."

**D**ONORY and Blue both blinked.

They were seeing evidence of the thoroughness of the government secret agencies. That building was diplomatically immune. It would create an international disturbance if the United States were even suspected of tapping one of those phone lines. Yet a whole agency or department, with dozens of employees, de-

voted its entire time to recording every word spoken on every phone in the building!

And they were seeing the last "logical" theory about that mysterious telephone go up in smoke!

Carty watched the expressions on their faces with satisfaction. Then he added his final blow to their theories.

"Radio is out also," he said. "We've had directional all-wave receivers pointed at that building from every direction for a long time, too. They were working when the girl made that telephone call, and no radio signal of any kind went out."

"Good work," Donory said with a wry smile. "Now, if no one had replied to the girl, we could conclude the coils attached to the phone robot are nonsense coils."

His mind turned to Jerub and the talk he was scheduled to make. He glanced at his watch. It was five-thirty. In two and a half hours Jerub would make a talk that might cast a little light on some of this nature defying nonsense. If what Jerub had to say cast any light on the subject, it might be a good idea to turn the young physicist loose on the phone mystery. He might be able to solve that too.

**J**ERUB glanced at his watch. It was five-thirty. Betty was a little later than usual in coming out of the office building. He frowned. If she didn't come soon he would be in a predicament. He had to eat, change clothes, and make it downtown before eight o'clock.

Her coolly soothing voice sounded in his ear.

"Sorry I kept you waiting so long, Jerub," she said. She had come out while he was looking at his watch.

"Let's hurry, Betty," he said, forgiving her with a grin. He took her

arm and walked rapidly to his car in the parking lot.

Fifteen minutes later he dropped her off at her rooming house and drove away. As he pulled away from the curb he glanced into the rear view mirror to make sure no cars were coming. What he saw made his eyes open wide.

Two men were sitting in the back seat now. They had evidently been there all the time, hidden on the floor of the car.

They had guns. The guns were only a few inches from the back of his head.

"Turn right at the next corner," one of them said easily, as if pointing guns at strangers' heads was part of his everyday work.

Jerub did as he was told. A fierce glow of triumph rose in his breast. Here was a physical proof that his conclusions were correct.

The triumphant feeling was followed by a bitter feeling of regret that he had not made Donory listen to his explanation while he had had a chance. Now, perhaps, it might be too late.

His thoughts churned while he drove along at a moderate speed, turning or going straight as the two in the back seat directed. They kept low so that no one outside the car could have been aware that it contained more than the driver.

Jerub thought of suddenly twisting the wheel and wrecking the car. He didn't do it because he had a sinking realization that these two men would probably kill him if he did. In fact, he felt sure that they were going to kill him shortly anyway.

His only hope lay in some unexpected break. His only course was to play along and watch for such a break.

Having decided this, he turned his

thoughts to how these two men had known about him. Unquestionably they had learned of his finding out what the exchanging of X-ray characteristics in prepared samples meant. Who had told them?

No one had been allowed in his part of the lab building for three weeks except G men. Unless one of them was a traitor to his country no one else could have told them except—Betty!

THE THOUGHT shocked him out of his composure. Betty! But how could it be? Still, if it hadn't been her why had they waited until she got out? Why hadn't they taken her along too?

Speculation was cut short by an order for him to turn into the next driveway. The car was going along a street of large expensive residences. Jerub had been in this part of the city before and knew that many of the richest people in the city had their homes here.

He knew he would be able to find the place again, and it worried him. If these men didn't care whether he knew where he was going or not, they probably felt confident that he wouldn't live long enough to tell anybody about it.

No one was in sight on the street. He turned into the driveway obediently, his hopes growing dimmer by the minute.

The driveway wound around the house to the rear. A two car garage was at the end of the driveway. One set of doors was open.

"Drive in," one of the men ordered.

When he braked the car to a stop in the garage he heard the rumble of the doors closing. This was followed by a sensation of moving slowly downward. The window in the rear wall of the garage was rising out of sight. It was an elevator!

Two minutes later a large garage revealed itself. There were several cars parked there. The elevator came to a stop with a slight jar.

"Get out," he was ordered.

One of the two men left the car and stood with his gun ready while Jerub climbed to the floor of the underground garage.

A mechanic appeared from someplace and casually climbed into the driver's seat, starting the car. He was parking it along the wall when Jerub was led through a door into a hallway.

He was halted while one of the men unlocked a side door. He was ordered to pass through. The door slammed behind him and he heard the key turn in the lock.

He glanced around. It was an ordinary room with a cot and a chair, with a bathroom off in one corner which he could see through an open door.

A phone was on a desk in another corner. He walked over and lifted the receiver. The line was dead.

"**D**AMMIT, Mr. Donory," Carty said with no attempt to hide his exasperation. "It seems to me to be too absurd to link Jerub Conners' disappearance with some threat to our country. Some funny business has been going on at Grant-Peeble in their routine lab work. You say that what has been going on is impossible. Therefore it must be linked up with the phone business because it's impossible too. I don't get the connection."

"The connection isn't obvious, I'll admit," Donory said patiently.

"By that I suppose you mean I can only see the obvious," Carty growled. "Well, maybe you're right. I suppose I should take your word for everything. If Jerub Conners was supposed to have showed up

here an hour ago and didn't, maybe it does mean foul play. I take it he was a conscientious fellow, and would have shown up or called if it was impossible for him to get here. My men have been checking hospitals and the police accident division. If they find anything they'll call me here at once. But unless you have something I can sink my teeth into I can't do anything."

"How about the girl, Conners' girl friend?" Donory asked.

"She's at home," Carty answered. "He met her after work. He took her straight home and then drove off. My men parked where they could watch her place. They didn't follow Conners because they didn't have orders to do more than keep on the girl. She hasn't come out. She hasn't used her phone. The last report before I came down here was that she was sitting in her room reading a book. At eight-ten she was reading page two-hundred seventy-three. She was nibbling at a cream-filled chocolate from a two pound box. It was the seventh out of the box, the second she had eaten. She ate the other five last Wednesday. She's an intermittent candy eater, buying a box and forgetting about it except for occasional spells. And the only thing she had on her mind was the book because she was turning the pages every three and a half minutes, which is her full attention rate of reading. If anything has happened to her boy friend she doesn't know about it yet."

"When was the last time I coughed?" Hinton Donory asked, then added hastily, "Never mind. I was just trying to be funny. But, seriously, I want you to take my word for Jerub Conners being either kidnapped or killed because of the talk he was going to give here tonight. There is some enemy, whom

we *think* is Russia, behind all this. We think it's Russia because of that phone call we are puzzled about, to the office of Gregor Palovitch. Now in some way this unknown organization found out that Jerub Conners had found out something from the mystery at the lab. What it is we have no idea. We do know he must have found out something, because he correctly named ahead of time all the samples that would show wrong X-ray spectrums. He was going to tell us tonight what he found out. He has disappeared. Therefore I conclude that what he found out is mixed up with the business of the phone."

"Maybe it was a secret message," Carty said with a snort.

"No," Donory replied. "That's out of the question. It's some important new principle of physics of the atom. My own opinion is that this secret organization is trying to keep us from finding out what it is, because Russia has some new weapon based on it, and if she can keep us from discovering the principle she can be in a position to defy the world again in a few years."

"Maybe you're right," Carty admitted, "We all know that Russia's secret dream is to make a major scientific discovery and develop it so far that the rest of the world will never catch up."

"There's something about Conners' lab," Donory went on. "It must be that. Something unknown to our science. It must be accidental, whatever it is. Maybe the steel girders of the building set up a peculiar force pattern in some way. Maybe we will never discover the cause."

"So you have to have Conners back or else," Carty said. "Well, we are doing our best on that score. Meanwhile, I would like to do something routine. It's silly, but more than

once we've gotten results by just exhausting every possibility, sane or absurd."

"Anything you say," Donory agreed. "I'll be the first to admit that it will probably be something absurd that cracks this present setup."

"Give me the complete lab reports from the beginning of this lab mystery," Carty said.

"You can take the ones I have in my brief case," Donory replied. "Since Jerub will probably not show up they won't be of any use to me tonight, and I can get another set in the morning for my own use."

"Thanks," Carty said when Donory fished them out. "I'll be going along now. Stick around here for another hour in case we find something. If Connors shows up or calls, notify my office."

ON THE way out of the building he had a peculiar experience which he was to remember later. It was while he was waiting for the elevator to come up.

Without warning an icy chill seemed to settle in his chest. The hair on the nape of his neck rose, and his scalp experienced a prickling sensation. It lasted for no more than a few seconds. He glanced around. The hall was deserted. He felt of the papers in his breast pocket that Donory had given him. They were still there. So he decided that maybe he had merely experienced a chill. When the elevator came he forgot all about it.

Weaving his car through the evening traffic he went out into the suburbs, stopping at a small house. He walked up to the porch and knocked, ignoring the bell.

A grey haired lady answered.

"Oh, hello, Mr. Carty," she said with real warmth.

"Hello, Mrs. Green," he said, taking off his hat. "Is Charlie around?"

"Come right in," she answered. "He's in his den. You know where it is. You look tired. I'll fix some coffee for you."

"Thanks," Carty said, smiling. He walked past her across the worn rug. The furniture was quaintly old-fashioned, of the beautifully grained walnut veneer so popular in the middle twentieth century. Quite a contrast to the pastel plastic furniture seen everywhere.

He rapped once on the door to the den, turned the knob and walked in.

Charlie Green lifted his head from a paper on a large desk.

"Oh, hello, Carty," he said. "Another puzzle?"

"I hardly think so," Carty answered. "But there's a very slim chance it might be. I'm playing that long shot."

Quickly he outlined the events of the past few weeks. When he finished he gave Charlie the papers Donory had given him which contained the reports on X-ray pictures of samples from Jerub's lab.

Charlie took them eagerly. As a code expert, if any sort of sense could be made out of the reports, he would find it.

Fifteen minutes later Mrs. Green brought in a tray of sandwiches and a pot of coffee. Carty relaxed over the sandwiches and watched Charlie. An hour went by. Then another. It was midnight when Charlie straightened up with a sigh.

"There's a sensible message all right," he said. "The message itself doesn't make sense, but it's words, in a sensible order, and they do have a meaning of a sort."

He handed a slip of paper to Carty. The message was, "THERE'S REASON EVEN IN MADNESS."

"Huh!" Carty grunted. "How did you get that out of it?"

"The spacing of the discrepancies," Charlie said. "It was simple. I thought of that for my first try. The message was in Morse code. That's why Conners was able to predict the discrepancies ahead of time that last time. He figured it out. The message is repeated over and over. The same thing several times."

"Now what do you make of that!" Carty said softly.

His face lighted up. He reached for the telephone. Donory was still at the office where he had left him. Briefly he told him what he had found out. He hung up on the expressive silence from the other end of the wire. Then he looked at Charlie Green and chuckled.

Next he called a newspaper. For half an hour he dictated tonelessly into a wire recorder through the phone. When he hung up he was satisfied. By morning the news of the entire mystery at the laboratory of Grant-Peeble would be all over the nation. In that way, he hoped, whoever had kidnapped Conners would realize they had nothing more to gain by holding him.

**T**HERE'S REASON EVEN IN MADNESS. Hinton Donory stared at his scrawled writing. The words themselves weren't startling. Perhaps to an ordinary man it might not even be startling to know that they had been morse code in which the dots and dashes were made by changing or interchanging the X-ray properties of different elements.

To a physicist, however, and one who was outstanding and generally introduced as the world's greatest living physicist, it was absurd. He knew the details of the theories on X-rays. He knew the data to back those theories. He knew of the many

predictions about X-ray spectra of elements and alloys, some of which had been made by himself, and how they had been confirmed, thus further strengthening the probability of truth in the theories that made the predictions possible.

To "lift" the X-ray properties of a lump of metal out and place them in a similarly shaped lump of metal, like interchanging eggs in baskets, was utterly insane. Yet he had seen just that happen while he was doing Connors' work.

If he had been a doctor instead of a physicist he could have been no more surprised to find human blood in a dog and dog blood in a human, and then five minutes later find them the way they should be.

Then there was the other "impossible" happening; a girl named Betty talking into a phone connected to a robot phone of the standard variety, with the only apparent difference being a couple of air core coils hooked to it.

Betty giving a number through that phone and being "connected" with a silly voice that in spite of its silliness gave sensible answers. Yet there was no place that "voice" could come from.

Donory's logical mind turned from the "logical" answer, refusing almost to form it into thought.

He kept coming back to it and shying away from it. At last he had to face it. There were intelligent forces, entirely invisible, who were back of this whole mystery. More than that! If one of these intelligent forces could "lift" X-ray properties out of a piece of metal and put them in another, then those X-ray properties must belong to something separable.

Therefore, there must be a type of "matter" separable from matter as

he knew it, that had the X-ray properties.

X-matter. He wrote the term down after the "message". Then he stared gloomily at it. A few minutes later he wrote under it.

**X-RAYS ARE RADIATIONS FROM X-MATTER. X-MATTER HAS AFFINITY FOR ITS COUNTERPART IN MATTER, BUT IS SEPARABLE.**

**H**IS MIND began to work more easily. He wrote again:

"Since X-matter can be lifted out of matter and put back in again, or in some other object of matter, it holds its shape and properties out of the matter it normally is in. For how long?"

He thought of the nonsense coils on the robot phone. He visualized similar coils of X-copper, invisible to normal eyes, resting within the fields of the two coils connected to the phone. He visualized an entire telephone exchange made of X-matter, which could have filled that office without being detected.

All this added up to a perhaps complete periodic table of elements in X-matter! This implied that the intelligent forces acting, answering telephones and conveying messages by morse code in an X-ray lab, could be living organism—*Men!*

Once the idea was born in Donory's mind, dozens of facts began to click into place to support it. There was already evidence to prove the possibility of such matter.

Neutrinos, like neutrons only smaller: positrons, like protons only smaller: they could very well form the building blocks for nuclei of atoms exactly like the series of known atoms in every respect EXCEPT that they would be about eighteen hundred and fifty times smaller.



Their field patterns, which determined orbital electrons and also chemical and physical properties of matter, would be interlocked on this finer scale. A solid made of X-matter could "flow" through ordinary solids with no more resistance than an electric current, and without disrupting the structure of either.

And, this was the final thing that clinched the matter, it would be possible to conclude now that visible radiations were produced by nuclei of ordinary matter, and X-ray radiation by nuclei of X-atoms.

Donory forgot about the mystery into which he had been drawn. His scientific mind immersed itself in the complexities of the vast new theoretical picture of the Universe opening to his intellectual gaze. A Universe right around him, which no one had ever suspected...

**J**ERUB SOON grew tired of exploring his prison. Aside from the cot, a chair, the wall phone, a small table, and a dumb-waiter that was barely large enough to get his head in and was therefore out as an avenue of escape, there was nothing to explore.

The room had obviously been built for the express purpose of being a prison when it was necessary. It would have taken story book scientific gadgets to break out. He didn't have any buttons on his shirt which, when ground to powder and dropped in the Keyhole, would melt the lock. He didn't have a vest pocket transmitter with which to call in the police. He couldn't think of a single idea for escaping.

At eight o'clock a rumbling sound came from the dumb-waiter. It was a substantial meal being lowered to him from someplace above. He ate the roast beef dinner and drank

three cups of hot coffee from the large pot. When he had finished he set the dishes back on the dumb-waiter and relaxed in the lone chair.

He knew that by now Donory would have called in the police or maybe just Carty. Regardless, there was no way of tracing him.

At ten o'clock he wound his watch, took off his shoes, and lay down on the cot. The light in the ceiling bothered him but he left it on. Later he woke to find the room dark, and smiled to himself.

His belt buckle was bothering him. He took off his shirt and trousers and placed them neatly on the chair in the dark. Soon after he was fast asleep.

Consciousness returned with a snap. He was sitting on the edge of the cot, his senses seeming almost painfully acute. His whole body seemed to tingle with a freedom that was strange.

The room was no longer dark. The light was still out, but a luminosity pervaded the room without seeming to have any origin. It gave the room an eerie look. The walls were almost transparent. He could see the metal lath under the plastered walls.

For no reason he turned his head and looked down. His body was laying on the cot asleep. This seemed perfectly natural to him. It seemed the most natural thing in the world to sit on the edge of the cot and see himself stretched out on the cot at the same time.

It occurred to him that it shouldn't feel natural, and he frowned, trying to decide why not. Experimentally he stood up.

"Nothing wrong with me," he decided.

Then he was standing in the hall outside the room. He thought about this and decided he must have had a lapse of consciousness.

"Now let's see," he mused. "I was going to do something. What was it?"

He glanced both ways along the hall, then started walking away from the direction of the underground garage.

THE HALL took a sharp turn and revealed steps leading upwards. At the top was a door. He went through the moves of grasping the doorknob with amazing results. His hand passed through the knob with a tingling sensation.

This amused him. Shrugging his shoulders he took the last step and walked into the door. It seemed just a blurred form as he stepped through it.

Now he was inside the large house he had seen as he turned into the driveway in his car. He decided to look around. The part he was in was a short hallway with several doors leading off to other parts of the house. He walked through one at random.

There was a smirk on his face now. He knew he was dreaming and enjoyed that knowledge. He also knew that someone was waiting for him. Therefore he felt no surprise to discover the room he had stepped into was a luxurious office with a desk, and that a man was sitting behind the desk.

For just a moment he thought it was Meade, and that he was at Grant-Peeble, about to be bawled out for making mistakes. Then he remembered that was in the past.

The man looked quite a bit like old man Meade, but somehow bigger and more mature. The thought rose into his mind that it could still be Meade, as though, in dreams, size and appearance didn't matter.

"I've been waiting for you," the man behind the desk said.

"How melodramatic!" Jerub said, laughing.

"Isn't it," the man smiled. "You see, I'm the man who has been switching X-ray properties of samples around in your lab."

"So it was *you*!" Jerub exclaimed. "I'm not Mr. Meade," the man said, interpreting Jerub's tonal meaning. "I'm—it doesn't matter so much who I am. I want to explain what all this is about."

"Oh, I know already," Jerub said. "You are a visual representation of my subconscious mind. You look a little like old man Meade because he lies just in the background of all my work and ambitions, so he is a fitting representation. You, my subconscious, have found an explanation to all the mystery, and have chosen this dream to lower the barriers so that you can give it to me straight. That's perfectly all right with me. I've always known that subconsciously I was dramatic, and the subconscious likes to take methods like this to speak to the conscious mind. Fire away. I'm listening."

The man behind the desk smiled. "A wonderful rationalization," he complimented warmly, "but I suppose the mind must rationalize when confronted with something completely strange. There's no real harm in it."

"That's right," Jerub agreed. "So now that we understand each other, tell me what you have to say."

"Very well," the man behind the desk said with a patient sigh. "You will have to listen, though, and not keep trying to rationalize everything. After all, the mystery at your lab can't be rationalized into Freudian properties of a mythical censor, which is just an invention of psychologists to 'explain' something they don't understand, as yet."

"That's true," Jerub said, a new

tone of respect creeping into his voice. "I'd forgotten about that."

**I**N AN ORBIT just beyond that of the moon," the man began, "is a planet called the Dark Planet by students of what men believe to be the occult. This Dark Planet is not of matter as you know it, but of what those same students of 'occult' matters call 'spirit substance'. This substance is just as real as ordinary matter, though students of the occult prefer to consider it something beyond the pale of understanding, and thus give it an exalted standing.

"In ages past, many of the world's worst criminal and war leaders escaped to the Dark Planet after they died. From it as a base they have come back time after time to incite war. Now they are planning a final coupe which will leave them in full possession of the Earth."

"Well why don't we stop them?" Jerub exclaimed. In the back of his mind he vaguely wondered where his subconscious had pulled that whopper from. A Dark Planet circling the Earth in an orbit outside the Moon's!

"It's impossible to stop them," the man answered. "Only one thing can be done. The world must give in to them without a struggle."

"You are talking like—" Jerub began.

The man nodded coldly. "That's right," he said. "I'm one of them. We are going to succeed for the simple reason that we have been preparing for centuries. We are prepared to turn nation against nation, brother against brother. There is only one thing necessary to ensure our success. That is for the weapons of the United States to have flaws in them that can't be discovered before they are at the active front in

the great war about to be started. That's where you come in."

"You mean that's where I go out," Jerub said with an uncomfortable laugh.

"No," the man persisted. "That's where you come in. There's nothing you can do about it. When you return to your body you will follow out the orders I am going to give you. If you don't..."

He rose and walked over to the end of the room. In doing so he passed through a chair as if it wasn't there.

There was a small cage, and in the cage were two white rats.

The man took a small thing out of his pocket that looked like a flashlight.

"This is an ordinary flashlight," he said. "Rather, it is a flashlight made of the same stuff that I am made of, and the Dark Planet is made of. In your body you couldn't see it nor grasp it in your hand. Now watch."

His hand holding the pencil flashlight passed through the screen wire that covered the front of the cage. The pencil flashlight seemed to immerse itself for a small distance inside the head of one of the rats.

His thumb pressed the stud on the barrel of the flashlight for a second. The rat slumped instantly dead.

"Now you do it," the man said.

Against his will, Jerub advanced and took the small light.

**H**E PUSHED his hand into the cage, feeling queer at the sight of his arm passing through a screen.

He let the lens of the flashlight go into the skull of the remaining rat. The small animal seemed unaware of it.

He pressed the stud and saw the rat stiffen and fall, dead. Then he

turned questioningly to the man.

"You see," the man said. "The stuff this flashlight is made of is the same stuff that produces X-rays. When you turn it on its light is X-ray radiations. The light you see by now is X-ray radiations in very low intensities. So the rats died from searing burns inside their brains. The X-rays were focussed by a lens just as in the flashlights you can buy in the dime store, a lens made of a glass that would be nonexistent to you in ordinary life. At the point of focus they are strong enough to destroy living matter."

He took the flashlight from Jerub's unresisting hands, and returned to the desk.

"I could do the same thing to you at any time when you are in your body," he said dryly. "The doctors would call it heart trouble. They would be right. I would place the lens at the spot in your brain that controls the heart. I would destroy that part. Your heart would stop."

He chuckled mirthlessly. Jerub thought, "This dream is rapidly becoming a nightmare."

"Or," the man interrupted his thoughts. "I could place it at another area in your brain and sear it. As I chose, I could make you blind, deaf, crippled by paralysis, or insane. So you see, you are utterly at my mercy."

"What do you want me to do?" Jerub asked quietly.

"First," the man said, "I want you to keep your mouth shut about what you have learned. Second, as time goes on we intend to get more and more agents in Grant-Peeble, which makes the key equipment for all war machines, so that its products will pass inspection but fail when the crucial moment comes. That means great skill and willing cooperation

from men like you. Alloys must be passed which age by a certain date so they will stand up under test, but fail when actual use comes. Do you get the idea?"

"Yes," Jerub whispered.

"When you leave here you will be released. You will return to your rooming house and tell anybody who asks that you decided that you were wrong about your theory on the lab mystery. And if you don't follow my orders to the letter I will turn my little pencil flash into the brain of the girl you love and make her an idiot."

"Tell me," Jerub asked, "are you Meade?"

"No," the man answered. "A long time ago he was my brother. If it were not for him I would today be the ruling power of Asia. He is of the forces that call themselves Good, though they are but a pack of fools who think that we, the real entities of humanity who control man's destiny, should be but servants to the gross flesh-race."

"I wish I would wake up," Jerub said suddenly.

"First, your orders," the man said sharply.

Jerub waited for him to continue. Something was wrong. The voice didn't continue. Instead there was silence. With an effort he brought himself awake.

HE WAS lying on the cot. The ceiling light had come on again.

His head ached and he had a feeling that he had had a terrible dream. He lay there trying to recall it. Meade was in it somehow. Old man Meade, the boss.

A key rattled in the door. Jerub shoved the disturbing dream out of his mind. The two men who had brought him there entered and or-

dered him to get dressed.

They blindfolded him and led him from the room. He felt himself pushed into a car.

"This is it," he thought.

Half an hour later the car came to a stop.

"Wait five minutes and then you can take off your blindfold," a gruff voice sounded.

He heard the car doors slam. A minute later the sound of a car speeding away came to his ears. He waited no longer. Pulling the cloth from his eyes he saw he was in his own car, just two blocks from the Grant-Peeble parking lot!

\* \* \*

Carty with his ever present cigar, and Forr with a cigarette hanging limply from his slack lips, strode through the crowd of reporters at the entrance to the general office of G-P.

"What's the latest? someone shouted. "Is it true that Conners has amnesia?"

"Take it easy, boys," Carty said expansively. "I'll give you the dope as soon as I can. Now step aside and let me through."

He and Forr went through the main reception room, through a hall and out the back of the building, crossing the blacktop surfacing of the yard to the lab building.

The newspaper with Carty's statements on the lab mystery had been on the streets for three hours, and they were reappearing in every newspaper in the country.

The two men were coming to the plant in response to a call from Meade who had said that Jerub Conners was back. Hinton Donory, the physicist, was already on his way to the place then, and was undoubtedly there by now.

When he strode into Meade's of-

fice Carty saw that he was. Meade, Donory, Conners, and Betty, were all there. His eyes lighted up with satisfaction when they saw Betty. It was about time he had a talk with her. The others might as well be present. First, though, he wanted to find out what had happened to Jerub Conners last night.

Jerub was sitting in a chair, not looking too well. Carty chewed at his cigar worriedly until Jerub spoke.

"I'm O.K.," he said. "Just worn out."

"What happened to you?" Carty asked.

"When I dropped Betty off and started up there were two men in the back seat. They pointed guns at me and made me drive to a house in the suburbs. I wasn't blindfolded, and I can remember knowing at the time just where I was. But now, for the life of me, I can't remember whether it was north, south, east or west of town."

He went on to tell the rest of his story, including the fact that he had had a dream that still bothered him, but he couldn't remember the dream either.

"You *must* remember!" Betty said anxiously. "I feel it's very important that you remember it."

"I just can't," Jerub smiled wanly.

A queer expression came over his face.

"There was something in it about you, Betty," he said. "Also something about Meade. I have the impression it was some sort of a nightmare. And that's all I can remember about it."

CARTY looked at Donory who sat in a chair near the wall, an expression of satisfaction on his face. Carty guessed that Donory's brain

cells had been clicking all night. He would have to have a talk with him, but first...

"Betty," he said, turning his eyes on her coldly. "I think it's about time you did a lot of talking."

"About what?" she asked, confused.

"First of all," Carty said. "Who were you calling at Gregor Palovitch's phone number, and why? It's connected with this lab business."

"Gregor Palovitch?" she echoed. "I don't know the man. Is he Russian?"

"Andrew of-five-three-three," Carty said.

A look of recognition flashed onto Betty's face. Recognition and alarm.

"I—I'm sure I don't know what you mean," she said helplessly.

"Oh-three-four," Carty drummed relentlessly. "Do I need to repeat the message? I know it by heart now. If that isn't enough, I have it on a wire recorder. Do you want to hear what you said? Or will you talk?"

"Perhaps I can relieve your mind a little, Betty," Hinton Donory spoke quietly from where he sat. "During the night I have solved the major mysteries of the whole thing. There remains of course the details, but I know and can prove beyond doubt that the number oh-three-four is not in our physical world, but in a world which might be called the Astral by those who like to deal in things outside science. You were talking through a telephone exchange in the spirit world, to a dead person. Is that right?"

She nodded, not trusting to speech.

"Now," Donory went on, glancing in mischievous triumph at Carty, who clamped viciously on his cigar. "Evidently you did not know about the transfer of the X-matter—my own term for the physical matter of the spirit world—from one X-ray speci-

men to another. Because you didn't know about it you felt there was some sort of danger to Jerub, and wanted something done about it. That much is obvious. What we want to know is, your connection with the spirit world, and as much as you can tell us about all this. Especially we would like to know why that spirit telephone exchange is located in the private office of a man who is known by our government to be one of the ringleaders of a secret move to try to place Russia in control of the world. We aren't accusing you of being a spy or traitor. You probably didn't know where that exchange was located, from your reaction to Carty's statements. Please take us into your confidence. It will be the wisest thing you can do."

"The only one besides government men who knew that Jerub had discovered something vital to the lab mystery was you," Carty cut in. "You were late coming out of the office building last night. Why? So those two men would have a chance to hide in his car during the rush of employees going home? If they had tried to hide sooner the lot attendant would have become suspicious. In the crowd he wouldn't notice them."

"Please!" Betty said distractedly. "Give me a chance to think!"

"Think of what?" Carty asked coldly. "Lies? The truth doesn't need thinking. Tell it!"

"Will you be quiet for a minute?" Betty demanded with a show of temper.

Carty blinked his surprise.

"The most important thing right now is to find out what Jerub's dream was," Betty said.

Carty snorted. "Now it's dreams that are important! I think it's more important to find out what part you play in all this."

"LEAVE HER alone," Forr broke his silence. Carty gave him a long, thoughtful look, and then shrugged.

"That's better," Betty said, giving Forr a grateful look. "As I said, it's more important to find out what Jerub dreamed. Take my word for it. He can't remember. I know a way to help him remember, if you will all agree to help me."

"We'll help," Donory spoke up. "What do you want us to do?"

"Would you let me hypnotize you, Jerub?" Betty asked tensely.

A look of fear appeared on Jerub's face.

"No!" he said, his voice almost a croak.

Betty looked at him keenly. Carty started to say something. She held up her hand to silence him.

"Wait!" she ordered. "I see what's happened now. Jerub, I'm going to ask you to step outside while I do a little explaining to these men."

"Why?" Jerub asked, bewildered.

"Do what the lady says," Carty growled. Meade nodded imperceptibly when Jerub looked his way.

"I'll be in my lab," Jerub said, walking to the door. Betty ran after him and kissed him lightly on the cheek.

When she came back she sat down and closed her eyes. She remained that way for several minutes, ignoring the four men who were waiting for an explanation from her.

"This is not Betty talking," she suddenly said. She had not opened her eyes. Her lips barely moved.

Carty and Forr looked at each other with lifted eyebrows.

"She has told me all that has happened," Betty's voice began again. "She has stepped aside so that I could talk with you gentlemen. You are right, Dr. Donory, about X-mat-

ter. The object of the interchange of X-ray properties was to prepare you and your colleagues so that you could receive certain facts which you would not accept before. They are facts ostracized from scientific recognition because they are classed under the heading of supernatural.

"Until now, we, who are invisible and intangible to you, have been perfectly content with the state of affairs. It allowed us complete freedom from interference on your plane. Now, however, the picture is changed. Betty is one of those who are equally at home in both worlds. Many children are, but are soon taught to believe that the things their parents can't see are not real. The concept of insanity is instilled into their thinking. When they grow up they have built up mental barriers that effectively isolate them from the other side of reality. It is as if everyone were to be naturally blind except one person, and that person were to tell the others what he saw; and they, not knowing what sight is, were to convince him that sight is not real, and unless controlled, is insanity. He would perhaps believe them, and slowly his mind would block off his reception of visual images until eventually he would be as blind as the others, though his eyes would still be normal.

"It would be a psychic block. He might still see, but his reception of visual images would have retreated into his subconscious so that he could not be directly aware of what he sees. If he were walking along and a branch of a tree was in his way, he would see it subconsciously and have a hunch to duck.

"In the same way, all four of you are able to see and hear in the world that is reality to me, but have those psychic blocks that prevent such impressions from being impressed on



your conscious minds. Betty does not have those blocks because her mother helped her develop her other-world senses, and having them herself, was able to teach Betty to distinguish between other-world reality and imagination. *Your* parents and teachers taught you to lump all such impressions under imagination. So much for Betty.

“**N**OW WE come to the reason for all the present mysterious happenings. A war is about to begin. It has been planned very carefully. This war is not exactly planned for one side or the other to win, but rather, for all sides to destroy themselves.

“Some things, Dr. Donory, you will refuse to accept. One of them, undoubtedly, is the fact that Hitler and Napoleon were the same man. If you study the lives of the two you will see how as Hitler he tried to correct all the mistakes he made as Napoleon, that caused his downfall. As Napoleon he did not know too much of his own nature and abilities. As Hitler he knew it all in full consciousness. That is why he committed suicide as Hitler. As Napoleon he allowed himself to be side-tracked by exile to the isle of Mann. As Hitler, seeing that he had not yet succeeded in his goal, he died so that he could return the quicker.

“As Napoleon he used the French race to help him gain supremacy in the world. He realized too late that he could have better used the Germans. As Hitler he used the Germans, and learned that he might have succeeded by using the Russians. Today he is a Russian. Premier Arnoff! His goal, of course, is to become dictator of the World! It was his goal as Ghengis Kahn and as Alexander the Great. It has always been and

will always be his goal.

“As Hitler he began to rely more and more on his other-world agents and followers. Today he has perfected intercommunication between the two worlds, and is already waging the war on my side of reality, the world of X-matter.

“That telephone exchange connected to yours in Palovitch's private office is his. We use it sometimes when we can. When Betty called she had not known of the plans to prepare you men for this present talk. She naturally concluded that Arnoff's plans were already underway. She knew of them. That's why she works in Grant-Peeble as a stenographer. In that way she can serve as a spy in the X-world and see what is going on.

“Arnoff plans to incorporate defects in all vital American weapons of war. He plans to do this right at the factories, by seeing to it that crucial parts are made of materials that will fail under actual use, but pass all tests with flying colors at the factory and testing laboratories. In that way, when the physical war starts, his weapons will win out and he will be able to defeat the only country that stands in his way—America.”

“Who is this talking?” Meade asked quietly, his eyes on the surface of his desk.

When Meade asked who was talking, Carty sensed an imperceptible stiffening in Betty's figure. A vision rose slowly in his mind, a vision of the edge of a cliff with a bottomless chasm beyond, and threading out over that chasm were two ribbonlike roads going in different directions, which forked from where they were all standing.

He seemed to see a hooded figure standing in hesitation, peering down each fork in the road, trying to see across the chasm to the other side.

WITH THIS vision came a strange sensation like the one he had experienced the day before. It was the effect produced by a being from the other side when near him. He knew that now. Suddenly he realized that it must all be true. This person talking through Betty was not Betty, but yet was as real as he himself.

The vision vanished. At the same time Betty's lips moved again in speech.

"It may be hard for you to understand," she said. "But to give you a name and say that I am that name or person is something I am unable to do without making it all up for your convenience. It is true that I was Betty's grandfather, so perhaps it would be accurate for you to call me Arnold, or Arny as I was known then."

"Arnold Coates," Hinton Donory whispered in amazement. "I had just begun to suspect you might be. Arny, the mutant, who developed incredible science during his lifetime, only to take most of it with him when he died."

"Yes," Betty's voice said. "I was Arnold Coates. Betty is half mutant, half human. Her mother is my second child."

"It was you who switched X-ray properties of samples then?" Meade asked.

"It was I," Arny answered. "I did it because I need your help, the help of the government, to counter the threat of a universally destructive war. I will be back. While I am gone please listen to what Betty tells you. She knows everything necessary for the present course of action."

"Before you go," Donary asked hastily, "What is the principle of that broadcasting station you built once to effect emotions and end war?"

"That," Arny said, "cannot be used again."

A change came over Betty. Her breast rose sharply as she inhaled deeply. She opened her eyes, looked around, and smiled.

"From the looks on your faces I guess you must have heard all you need to know," she said.

"What was the name of your grandfather?" Carty asked.

"I had two of them," Betty smiled impudently. "On my father's side it was Fred Andrews and on my mother's side it was Arnold Coates."

"Do you know who Arnold Coates was?" Carty demanded.

"Why, yes," Betty said, paling. "Surely you don't intend to invoke that order of a dead dictator and have me killed, do you?"

"No," Carty said smiling broadly. "We're not that stupid now. On the contrary, I think Mr. Meade and Mr. Donory will agree with me that we must have you right with us so that you can advise us on every problem we run across. Right?" he asked, turning to the two men.

Meade reached for the phone and dialled a local number.

"Please have Miss Betty Andrews transferred to Research," he said.

JERUB HAD left the room with a mixture of feelings. Foremost was the sense of frustration. He stood outside the door in indecision. He was still standing there when Betty's voice came faintly, saying, "This is not Betty talking."

Glancing guiltily around to make sure no one was near, he decided to eavesdrop. He listened until he heard the pronouncement, "Betty is half mutant half human."

Half human! He could stand no more. He rushed blindly out of the lab building, out the gate, and to his car.

Half an hour later he was speeding along a highway. His dream was coming back to him now, only it wasn't a dream. He knew that. He also knew that something strange was happening to him. He started to reason it out.

All his life he had half believed he had what some people called a soul. You can lose an arm or a leg without losing the power to think and be aware that you exist. In the same way, according to the theory of a soul, you can die, lose your whole body including the brain, and still have the power to think and be aware that you exist.

He was a little vague in his ideas of the difference between the soul and the spirit. He had thought both were connected with religion. He knew differently now, and the concept of the universe it opened up wasn't something you could just pick up and pass off casually.

He tried to visualize the X-body, or spirit and his normal body, coexisting the same space. Both were real, and one was just as real as the other. Then why weren't some people's minds concentrated on the other world, the X-world, so that they didn't know the ordinary world?

The answer to that was obvious. The normal body weighed many pounds. The X-body of a two hundred pound man weighed less than two ounces. That was assuming that with the atoms eighteen hundred times lighter in weight, there were the same number of X-atoms in the composite body as ordinary atoms. If consciousness resided only in the X-body, it couldn't drag the heavy gross body around. The X-body would walk right out of it! That was the answer to that!

But was the X-body, which could pass through ordinary matter with ease, able to pass through X-matter

with the same ease? If it could, then the X-world would be just as much a phantom to the X-person as the ordinary world would be to him.

If it couldn't, then an X-object separate from gross matter, say a brick wall of X-matter, would bring the X-body to a dead stop, while the gross body would walk on unhindered!

"What a problem!" Jerub muttered. "If it weren't for that X-ray business I'd think the whole thing was crazy!"

"No, it's not crazy," a voice spoke beside him.

Jerub turned with a muttered exclamation. Sitting beside him on the seat was a man who looked strangely familiar. He looked like the pictures of Arnold Coates!

"Watch what you're doing!" Coates exclaimed, grabbing at the wheel. The car swerved back onto the road with a screech of tires.

When Jerub had the car under control again, Coates chuckled.

"Quite a shock, wasn't it?" he said. "I've been here all the time. Followed you out of the plant. Now that I know what that dream was that you had, I decided to have a long talk with you. You see, I've been talking to you from the *other side*. That's where your memories of that experience last night are deposited. Betty wanted to get the same effect by hypnotizing you. That would have had to go past the barriers in your gross matter brain to be successful."

"So you know it all," Jerub said with a sinking feeling.

"Yes, you needn't worry about it. In fact, if I had not learned what was done with you, you would have been dangerous. How would you like to join me in an effort to capture the leaders of this plot to start war? It would mean that you would have to leave your body for quite some time."

"C-c-c-could I do it?" Jerub blurted.

"Of course," Arny reassured him.  
 "I'll help you..."

**D**URING THE following two months Jerub experienced things beyond the most fantastic dreams. He learned to see. At first, things in the X-world were vague and illusory. A thing seen clearly had a tendency to change into something else under the influence of his thoughts. It made him think that perhaps his thoughts might be controlling X-matter; but soon learned that due to his own habits of thought, his seat of imagination interfered with his X-senses.

It was like having an unsuspected seat of imagination between the visual centers of the brain and the consciousness that could take the incoming images excited by actual external objects, and shape them imaginatively, so that they would arrive in consciousness with all the reality of an externally excited image.

The same applied to hearing. Sounds come to the conscious mind with a quality of externality and reality that distinguished them from internally induced auditory thought. If imaginative resorting took place it would be impossible to completely trust the ears.

The "organ" of consciousness, taught to group all external stimuli from the X-world into the lump of imagination and internal activity of the mind, could only with great difficulty distinguish between imagination and the reality of the X-world.

The time came when Jerub could leave his body just as easily as he could get out of his automobile. Under Arny's careful guidance he avoided all the dangers and pitfalls that lay in waiting. The clinging creepers of the vine of imagination were pruned away so that they could not lure him into a world of pure

imagination. Half mad beings of the X-world who are always searching for a body they can usurp were seen and driven away by Arny until Jerub was enough at home in the transition to drive them off himself.

Betty joined in on it. Eventually Jerub, Betty, and Arny were able to take long trips, while the bodies of Jerub and Betty were left in the security of their rooms, protected by thick barriers of X-stuff from any danger that might threaten them.

**J**ERUB HAD almost forgotten the man who looked so much like Meade. If he did remember him at any time he brushed the memory aside with the assurance that Arny could handle him.

Then one day during lunch hour at the lab, he saw a picture in the paper. The picture was of the man that looked like Meade! Under it was a brief notice that Gregor Palovitch, the Russian diplomat, had arrived that day.

He showed Betty the picture and explained who it was.

"We'll have to tell Arny," Betty said. "Palovitch's return might mean new danger, although from what you said he must have been here some of the time while leaving his body in Europe.

"We'd better take the afternoon off and drive up to my father's farm," she added. "Arny is up there in his lab."

Meade was out of his office so Jerub scrawled a hasty note telling him where they had gone. A few moments later he and Betty climbed into his car and left the parking lot.

\* \* \*

They didn't notice the car following them until they were fifty miles from the city. Jerub stopped to get gas. The car sped past the service station. It was a heavy sedan with

four men in it.

When they started up again they had only gone a mile when the car was behind them again, keeping a distance of a quarter of a mile.

"What'll we do?" Betty asked.

"We'll have to make a run for it," Jerub said. "I don't think we should try to get to the farm. There's four of them. We'd better stop at the next town and try to elude them and go on by train or bus."

The highway straightened out. For several miles it ran perfectly straight. There wasn't another car in sight.

The pursuing car picked up speed and slowly shortened the distance. Jerub had his foot to the floorboard. The speedometer of his light car hovered at eighty-five.

The other car pulled alongside and slowly forced him off the pavement onto the dirt. He had to slow down to avoid crashing. A small culvert across the road forced him to stop. Three of the men in the other car climbed out with drawn guns.

"All right, you two," one of the men said. "Get out and into the back seat of our car."

"Two of them are the ones that got me that time," Jerub whispered.

"And there are several X-men to stop us on the other side," Betty whispered.

They did as they had been ordered. One of the four men got into their car and followed along behind.

The two cars returned to the city and went to the house that Jerub hadn't been able to remember. The cars went into the underground garage.

**T**HIS TIME the man resembling Meade in appearance was behind the desk in the flesh. The cages of white rats were gone.

"So," Gregor Palovitch said, a humorless smile on his handsome face.

"It seems that I didn't reckon with a very formidable adversary. I see that Arnold Coates undid all my pos-thypnotic work so that you are valueless to me, Jerub."

"That's right, Palovitch," Jerub said with a calmness he didn't feel. Although he now knew that death would merely mean the end of his flesh body, it still held all of its terrors, and he sensed it awaiting him and Betty.

"Look into the X-world," Gregor said.

Jerub and Betty did the bit of mental gear shifting for that. There were several Russians present. Standing to one side were a man and a woman.

"Those two you see are going to borrow your bodies for the time being," Gregor Palovitch said. "I know it can't be done ordinarily, but that is one of the great secrets of the Black Planet, outlawed thousands of years ago by the White Brotherhoods and perhaps forgotten by them. The 'borrowing' will be permanent unless the exchange is reversed by the same method."

"Arny knows how to do that," Betty said. "He will discover the exchange and undo it."

"I think not," Gregor said. "Arny is on a fruitless mission to Russia. That will keep him busy for a few days. Then the work we want done at Grant-Peeble will be accomplished. It won't matter."

Jerub was looking about the room with his X-vision. Over in one corner was a large cage with heavy bars of X-steel. To normal vision it would be completely invisible and intangible. He had learned that an X-body held in gross matter was locked there by the fields of the component atoms, so that it and the gross object became, in effect, one object.

A cage of the type in this room would effectively hold a prisoner

separated from his body, but a person in his body could pass through

The duro-steel sheets were to be made up into the thousands of small parts for robot control equipment for the army defense net of planes and other equipment.

Ordinarily better than half of the duro-steel alloys were turned down for this critical work and used for commodity manufacture. No check tests could be run, since all twenty-three of the duro-steel alloys were so nearly alike in all properties except the X-ray spectrum and aging properties.

It wouldn't take any hokus pokus of exchanging X-ray properties of samples to sabotage the works and put faulty steel into the mechanical brains of the national defenses. It would only take the substitution of perfect steel samples for the untested run, and that could be done if he were not there.

**T**HE FOUR men who had captured him and Betty were still in the room. They were spread out and too far away from him to be taken by surprise.

Gregor Palovitch sat behind his desk, out of reach. In another moment he would stop talking with Betty and order the beginning of the transfer that would enable a Russian spy to take his place in the laboratories in his own body!

There was a single window in the room. Jerub looked at it speculatively. It was covered by heavy drapes which were parted about two inches toward the bottom. Outside was a lawn with a flower bed just at the top edge.

His angle of vision was slight. He didn't know whether the window faced the street or not.

A figure moved into his line of vision out on the lawn. It paused, then moved slightly so that he could

see the face. It was Carty!

Jerub waited for no more. He had to create a distraction that would make it possible for him to reach that window and dive through. Carty must know they were in the house, but not where they were exactly. With Gregor here, it must be his residence, and consequently diplomatically immune to search, or Carty would have barged in and searched before this.

Suddenly he knew what to do. Still seeming to be studying the room, he turned his head toward the far end where the cage was.

Without warning he screamed as loud as he could and pointed toward the cage. He screamed with his X-voice just as loudly. Every eye in the room turned for a second to see what he was pointing at. In that second he ran and dived head first through the drapes. As he left the floor in his dive he pulled loose from his body and let it go. He felt the blow of the window pane, then he was on his feet and battling with the X-men in the room.

Ghostly phantoms were at the window. Weird flashes dotted the room. He knew these were the X-ray components of the flashes of exploding guns. They didn't matter. The bullets couldn't touch him.

His fists were flailing as he battled the X-men who closed in on him from all sides. He grunted with pleasure as he felt his fists drive home. Ghosts could feel too, only they weren't ghosts, but real men, solid to his fists.

Unaccountably they fell back. His fists found only empty space.

A new figure was standing in front of him. It was that of a man, tall and regal in appearance. His forehead was high and narrow, topped with close fitting coal black hair.

He wore tights of jet black. A black cloak with a crimson lining

draped loosely from his shoulders.

All this Jerub saw without thinking about it. It was the expression on the man's face that held him. The eyes were icy grey with insane rage. The mouth was twisted into a snarl of anger. The hands were raised as if to strike him.

Without being told Jerub knew who this was. It was Arnoff! The man who aspired to rule the world!

A THOUSAND thoughts flooded into Jerub's mind at once. They were thoughts from Arnoff's mind. Recognition of the entire problem presented by the scene he was seeing in this room, and of the impossibility of success in his plans for sabotaging the American defense machinery without long and careful revamping of plans; recognition of the fact that Gregor Palovitch would have to be publicly executed as a revolutionary to satisfy the United Nations that he, Arnoff, had nothing to do with it; desire to kill, kill, kill; realization that he *must* not, or he would endanger his own safety by getting Arny to track him down to avenge his granddaughter and her fiance.

Jerub stood there unable to move as he sensed all this. He saw the age old instinct for secrecy fighting in this figure of evil. Secrecy which had kept mankind in a state of complete ignorance concerning the other half of the universe of reality, so that when men died they were helpless or worse than helpless in their chains of misinformation and fantastic dogma and metaphysical understanding. Secrecy that had built up a contempt among men for those who tried to learn the truth, so that all men fought these seekers after the truth with a zeal that was itself far more "insane" than any frank statement by a student that he believed there *might* be a side of reality that was intangible and nonexistent to

normal senses.

Abruptly the figure vanished. Seconds later Betty moved into sight from one of the shadows in the room.

"Arnoff was here!" Jerub said excitedly. "Did you see him??"

"I saw him," Betty said quietly.

"Carty and his men have everything under control. I got a blow on the head that knocked me unconscious. For several minutes I have been hiding in my body, but unable to use it."

Tears filmed her eyes, but a smile played on her lips.

"It still hurts," she said, rubbing her head. "You were wonderful, Jerub."

They looked at each other for a long tender moment.

Finally Jerub laughed. We'd better resume our own bodies before they send them to the morgue!"

A WOMAN sat before a replica of an organ, her fingers playing over the keys, a faraway look in her eyes. The music she was creating was strangely beautiful. She herself was beautiful in a strange way. Her forehead bulged slightly, though noticeably. Her head was large beyond the limits of normality, though her face and figure were small and finely proportioned.

A man stole softly into the room and crossed the floor to stand just behind her. It was Arny, and the woman was Amelia, his wife.

"You're in a quiet mood," Amelia said without turning her head. "That means that you have done something and are content for the time being."

"That's right," Arny said, running his fingers through his wife's hair caressingly. While she continued to play the organ softly, he told her all that happened while he was gone.

"Then Arnoff is stalled on his plans for conquest," Amelia said.

"More than that," Arny added. "Much more than that. War and bar-



barism will not end on the Earth until Man is no longer living in a half-world, and I've made a start toward least a solid one. Donory and Meade have data that prove the existence of the X-world. It will be published and that. A clumsy one, perhaps, but at other men will work on it too. One of these days people won't turn away from what they can't see with their ordinary eyes and hear with their ordinary ears. One of these days a little child won't be told that the things he hears and sees—that his parents and other grownups can't—are pure imagination, until finally he forces such things out of his consciousness and become spiritually blind, deaf, and dumb, and calls all who aren't the same, Insane."

"I know your dream," Amelia said softly. "I hope it comes true. But secrecy on this side and fear of the unknown on the other, are stronger enemies to overcome than all the Arnoffs and other dictators and despots. I'll bet that if Donory publishes his theories and facts concerning the existence of X-matter, he will soon lose his position in science. Other scientists who refuse to accept his conclusions will be able to say that it was all a mistake. They will rationalize it all out of the records. Even if they don't, there are millions of misguided X-people who will think it great fun to confuse the serious students and lead them into illusions and contradictory conclusions, and feed them conflicting evidence, so that in the end you will be right back where you started, and the great flywheel of human evolution will not have speeded up one iota."

"That may be true," Arny said, a faraway look in his eyes. "I have a long time here yet, though. I'm going to keep at it. Jerub and Betty will have children who will be able to see and know both worlds, I hope. If

they can't, somewhere along the line of future generations, their descendants, and those of our son, will intermarry and other mutants will reappear as members of the human race. They will be normal, where we were freaks. No, I think you're wrong, Amelia. I think that I've managed to start a little flywheel of my own that will grow bigger until it can effect the inertia of the old one, the one built up by both men and X-men to preserve a secrecy that is of no benefit to any except those X-people who have set themselves up as little gods over small groups of mortals and spirits. Those creatures of the dark planet who would find their immunity from punishment and their ability to keep the world in unrest and war and suspicion nullified, with the secrecy gone for good.

"Time will tell one way or the other, but I think I've got something started now that will become an avalanche that will wipe out the past and bring truth, real truth, to all men. I think that the day is not far off when there will be telephone exchanges all over the world connected into the X-world, and when living people will be taught about the true state of things on both sides. Already there are signs of it everywhere. People are no longer insisting that spirit is something outside of reality and beyond proof. People are beginning to think that science and reasoning are much better and surer ways to know things than infallible authority and authoritative tradition that, if it ever did have any truth in it, was twisted beyond recognition by scholars who disbelieved in the reality of what they studied

"Evidence is piling up that can't be denied forever. People's minds are changing from fear of heavenly wrath to curiosity and bold pursuit of knowledge. More and more people

*are expressing their convictions, that All is natural and understandable, and ignoring those who find it easier to scoff than to think and study."*

*Arny bent over and kissed Amelia affectionately.*

*"Yes," he said with conviction. "I really believe that someday soon all mankind will be one big family, working together. Both the living—and the dead."*

THE END

## PAINT-BOX RADIO

By LESLIE PHELPS

★ **A**BOUT A year ago this magazine ran an article on the new art of printed or painted radio circuits, in which wires, condensers and resistors were made by simply painting them on a ceramic strip with suitable liquids. At that time the subject was still quite experimental and almost the private property of the U.S. Bureau of Standards. But things move fast.

Now, available on the commercial market, in kit form, is a set of paints which enables the experimenter to build up radio circuits with a small paint brush. That this technique is the coming thing is unquestionable.

Numerous manufacturers have seized on the art for use in hearing aids, small radios (portable) and so on, and it is only a question of a short time before the system will be employed in ordinary radio and in Television. Wherever cheapness and compactness is desired, the printed or painted

circuit offers a solution. Thus, in the kits available, special paints containing silver are offered, which have a conductivity in one-eighth inch strips of a fraction of an ohm per inch of length of the strip. Resistors too have a resistance proportional to length and of surprising power dissipating qualities. It is easy then to paint a complete amplifier circuit on a non-conducting plate using only as external elements, such things as tubes and contacts or connectors.

While the technique is not yet widespread except on portable radios, and many hearing aids, it will soon be commonplace in all communications circuits.

A printed radio circuit looks almost like a schematic radio diagram. It is cheap, easy to serve and compact. And without a doubt is the method of the future. Watch for printed circuits in your new radios and television sets!

\* \* \*

## LIVE AND LEARN

By CARTER T. WAINWRIGHT

★ **I**T'S FUNNY how preconceived notions can be thrown out of one's mind by the announcement of a new discovery or twist to an old situation. A recent issue of Popular Mechanics magazine had an interesting article on how it has been discovered that an internal combustion engine works more efficiently and lasts many, many times longer when its operating temperature is in the neighborhood of between one hundred and ninety and two hundred degrees! This is contrary to a lot of old ideas.

Those who own cars know or at least have been told that engines should run around one hundred and sixty to one hundred and eighty degrees—but they weren't told that this was simply because engineers found it the easiest way to design a water-cooling system without worrying about evaporation. From every standpoint a hot running engine is better. Most of the wear and tear on car engines comes during the short period when they're warming up—thereafter the wear is negligible. This is because condensation of corrosive water

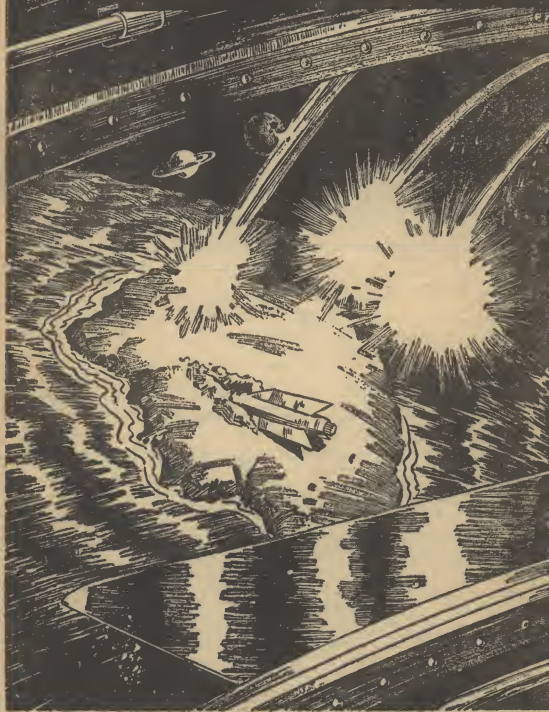
vapor and gases takes place, mixing with the oil and injuring the engine. A hot engine, one at two hundred degrees, boils away these harmful products and blows them out the crankcase breathing apparatus.

According to the magazine the substitution of a steam cooling system which permits this high temperature is much more efficient. The technical problems have been licked and undoubtedly in a short time we shall see compact steam cooled engines. It might be pointed out for those who think that steam is not an excellent cooling agent, that water in turning into steam takes up many times the amount of heat the water required to come up to the boiling temperature.

There is excellent economy in the practice of allowing an engine to warm up thoroughly before driving away—even if the gas is wasted. It more than pays for itself in the savings in wear and tear on the engine itself.

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# The FORM of



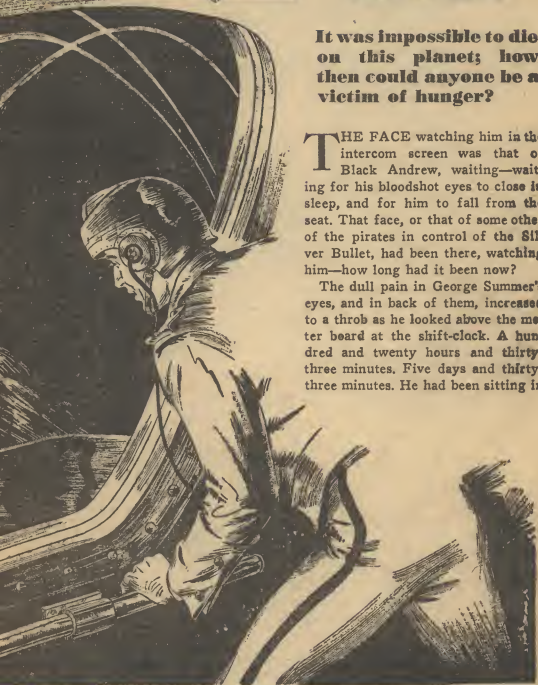
# HUNGER

By  
**CRAIG  
BROWNING**

**It was impossible to die on this planet; how then could anyone be a victim of hunger?**

**T**HE FACE watching him in the intercom screen was that of Black Andrew, waiting—waiting for his bloodshot eyes to close in sleep, and for him to fall from the seat. That face, or that of some other of the pirates in control of the Silver Bullet, had been there, watching him—how long had it been now?

The dull pain in George Summer's eyes, and in back of them, increased to a throb as he looked above the meter board at the shift-clock. A hundred and twenty hours and thirty-three minutes. Five days and thirty-three minutes. He had been sitting in



He looked through the view screen at the wrecked space ship on the planet's surface . . .

the seat that long without lifting his weight.

Just outside the welded-closed door were murderers with cutting torches ready, waiting for that instant when he took his weight off the seat and the shut-off relay tripped.

George Summers chuckled. It was a rasping, throat-tearing rattle of a chuckle that didn't help the throb in his skull. After a hundred and twenty hours without moving, it would be an utter impossibility for him to leave the seat without falling off.

The meter for number five rocket fluctuated a little. Automatically George's fingers did the necessary things to the remote control keys to sooth the meter needle.

The hoarse croak of a chuckle rose from his throat again. It would be so easy, he knew, to let the fluctuation grow. In less than twenty seconds the reinforced harmonic in the fission chamber would set off its entire fuel block, and—the surface of the sun would be like springtime back home in the Rockies by comparison.

But he hadn't been perched in the seat five days for that, nor had Black Andrew held back during that time for that.

It was very simple, really. Black Andrew was waiting for him to fall off of the seat. The instant he did, the seat relay would shut off the trigger wire feed. If that happened the safety relay wouldn't disconnect and permit the trigger wire feed to start up again until fission died down below critical. That would take at least two minutes—and in two minutes they would cut through the door and kill him.

What he was doing was very simple, too. He was building up velocity to the point where the ship would leave the solar system for good—besides keeping the six stern tubes going above critical so that he could

destroy the ship before they could cut through the hatch and shoot him. In only four more hours that velocity would be reached.

**G**EORGE SUMMERS looked at that moment with his mind's eye. What he was going to do would be a daring gamble. Not for him. He was going to have to die anyway and one end was as bad as another. His revenge would be in jeopardy. It would take perhaps a full minute to smash all six of the meters. During that minute it was possible for a reinforced harmonic to build up in one of the six rockets and destroy the ship—but not probable. Once the meters were smashed he would slip off the seat to the deck and wait for them to cut through the door and kill him—a useless gesture on their part, since they would be condemned to live out their lives in a drifting prison.

That would be revenge for Captain Walters and the crew and the innocent passengers that Black Andrew and his pirates had killed in cold blood. It would be his own revenge for what might have been—with Helen.

George studied the navigation video. The dots that indicated the planets and the sun were run by a complicated mechanism that showed their relative positions accurately, with the sun at 0-0. The arrow on the screen had the location of the ship at its point. The arrow's length indicated the velocity.

The ship was beyond Pluto's orbit now, headed outward. If he were to smash the meters right now it would take the ship over thirty years to return—

George caught himself just in time. He glanced at the six meters, his eyes

rubbing against sore eyelids. It had been nearly three minutes since a harmonic. The chances were a hundred to one that there would be at least one started in any given minute.

George looked into the video and grinned at Black Andrew. Detail was too coarse in the screen to show drops of perspiration, but George knew they were there, on Black Andrew's face.

Thirty years. At least now, if he did fall off the seat he could smash the instruments and be sure that most of the murderers wouldn't live to get back to civilization.

"It's practically in the bag now, Andy," George croaked, grinning at the face in the videoscreen.

He looked up at the navigation screen again. The ship was past Pluto's orbit. Could there be another planet still farther out? Too bad he would never be able to find out...

**B**LACK ANDREW switched his voice to the speaker outside the rocket-control room.

"Cut!" he ordered. "Cut fast. I want that man alive. Cut a hole first so you can shoot if he wakes up. Then cut out the door if you can."

He turned to Niels, his first mate, his black eyes glistening with anticipation.

"If he doesn't live to be tortured for a hundred and twenty-five hours in payment for this," he said, "somebody else will take his place."

"I'd better be turning the ship about for deceleration," Niels said. "And we'd better get somebody in to check on how much is left on the spools. Carty won't be as skilled a dis-control man as that guy is. He could start the ship spinning if one of the spools of trigger wire ran out."

"Hey, Bart," Black Andrew or-

dered. "Get away from that telescope and come over here and take orders from Niels. I've got to concentrate on that guy in the dis-control room."

Bart took his eyes from the telescope.

"There's a planet out there," he said. "About seventy million miles from here."

"What!" Black Andrew said. "Here. Come over and keep your eyes on that guy."

He went over and looked through the telescope. Bart was right. He saw a half-lit disc filling two thirds of the view. The automatic tracker was triangulating it from one position to the next in the ship's line of travel. At the edge of the image through the eyepiece was the distance to the planet and it was seventy million miles!

With a grunt of wonder he went over to the master teletype and typed out a request for information about the object. The robot computer, deep in the heart of the ship, gathering its data from every part of the ship, gave its answer.

Diameter of object, 12,000 m. Distance from sun, 320 billions m. Location—n.c..

Black Andrew glanced up at the navigation videoscreen. A new dot had appeared there showing the location of the unknown planet.

"What a honey of a ship!" Black Andrew said. "It was worth the risk of going to the Earth and shipping out as passengers on it."

"Yeah," Niels agreed. "And with all them spools of U305 trigger wire in the hold we can keep going forever. We're all set now."

"Maybe that planet would be a good base," Black Andrew said thoughtfully. "Twelve thousand miles. No sharp features. That means atmosphere and a cloud layer.



Internal heat. Maybe surface gravity like that on Earth."

He typed out a request for flight data.

**T**HE SPACE ship dipped suddenly below the cloud layer. Below was nothing but darkness through the ports, but the radar screen brought a scene of primitive swamp land extending from horizon to horizon. The analyzers said that the atmosphere was three percent ammonia.

"Looks bad," Niels said. "Think it'll be that way all over?"

"Make a great circle," Black Andrew ordered absently. "There's got to be high land somewhere."

He dialed the audivid intercom. A bed sprang into the screen. George Summers lay on it, his eyes closed.

"Damn," Black Andrew swore. "Maybe I won't get my revenge. Maybe he'll die and cheat me out of it."

He left the connection on and turned his attention back to the radar screen. Shortly an intensely bright cigar shaped object appeared on the screen. Its brightness indicated metal.

It rested on a dry plateau several miles across. An island of dry land in the monotonous swamp-land. Black Andrew's finger went swiftly to the flare firing button. As the metallic object came directly under the ship he pushed it three times.

"Circle back so we can take a look, Niels," he said. "That's a space ship or I'm Sarah Ratour."

It took a half hour to get the eighty-five thousand ton mass of the ship circled and headed back, the fifteen hundred mile an hour velocity killed to a mere five hundred and fifty cruising speed. The three flares

acted as a beacon.

Black Andrew shot out three more as they passed over the second time. The scene below was brightly lit, clearly visible through now unshielded pilot portholes.

Below was a ship of some sort—perhaps a space ship, but once again as large as anything ever built on Earth. It was partly buried in drifting sand. The rest of it was dull and unpolished, indicating unknown years that it must have rested where it was in order for its shell to dull so completely.

"We'll land," Black Andrew ordered quietly. "If that's a ship from some other civilization we may find secrets aboard that will give us greater power than any of us have ever dreamed of."

Niels brought the cross hairs of the stereoptican landing pilot together on a spot close beside the ancient wreck below. The central calculator directed the details of landing the huge ship without a jar—a task no human crew could have performed.

"Here we are, Andrew," he said quietly.

George Summers jerked his head up to look at the meters. His eyes encountered the length of his body stretched out in bed. Realization of what had happened flooded his mind.

It was replaced by wonder that he was still alive. He quickly surveyed his surroundings. He was in one of the compartments of the ship's hospital. The intercom videoscreen was alive. In it he saw the navigation chart across the pilot compartment with its new white dot, the arrow denoting the ship touching it. He saw Black Andrew and two of his men, their backs to him. More than that the screen did not show.

The lack of sound and the lack of a feeling of flight indicated that the huge ship had landed somewhere.



That somewhere, from the navigation chart, must be a planet!

A section of George's mind still puzzled over the miracle of him still being alive, and came up with the answer that Black Andrew meant to torture him to satisfy his desire for revenge.

A BITTER sense of defeat surged up in his mind. But a faint, desperate hope, unfed but undying, lingered. So long as he lived, George reasoned, something might come up that would still give him a chance to bring justice to these pirates.

For a hundred and twenty hours he had fought, with the conviction that he would surely die in the end. That conviction was still with him. It brought an immunity against the fear of death. Even a coward can eventually become inured to the thought of death after anticipating it continually for that long, and George had never been a coward.

It was obvious that Black Andrew and his crew would be too engrossed in the new planet to bother with him for a while. George felt a sense of relief—a surge of hope.

The short, bleached leaves of the itcl plants lost their flat-white color and became a glistening leprous white, the change starting at the base where thick stem rose from half decayed vegetation that formed the greater part of the top soil.

Where the leaves became wet they quickly became transparent, then began to dissolve rapidly. Often they dissolved at the base, the upper portion falling off to the ground untouched.

The patch of wetness moved slowly through the itcl patch, holding together, deliberate in its motion. In its wake was a foot wide strip bare of vegetation.

There were other, similar strips

over the ten thousand acre flat expanse of itcl grass. Some of them were lengthening. Some were not. Some were beginning to take on the flat white color once more as new itcl leaves sprouted on the old roots, for the roots had not been touched.

Overhead the dull grey ceiling of the sky remained as always, unmoving, monotonously undifferentiated. For a hundred thousand years there had been nothing to disturb the monotony of that uniformly grey ceiling that hung ten thousand feet above every part of the entire planet of Andron.

Into this unchanging, and inductively unchangeable scene, without previous warning of any kind, burst three intensely brilliant centers of light, hovering half way between the flat expanse of itcl and the equally flat ceiling of grey.

The untouched itcl leaves reflected back the intense light as a soft, uniform white. Where the slowly devouring wet areas lay, the light reflected with a glistening sheen, or passed through.

The wetness retreated hastily below ground as though alarmed. And from above came a giant roaring sound that seemed to originate directly above and retreat in two directions at once, in strangely confusing echo.

And where the wetness had been slowly advancing and devouring, to sink into the ground quickly when the first bright rays from the three centers of light touched it, now a slender tube of transparency poked cautiously out of the itcl roots, its end rounded like a lense—or an eye.

In a thousand places on the itcl field a thousand similar eyes watched the three centers of brilliance, unwinking. Nor did they shrink back when three more centers of brilliance sprang into existence as the huge thing passed overhead with a thunder-

ous roar.

But when the huge thing banked to return, every eye vanished, and in the unlit depths below the itcl plants, strangely sentient masses of wetness slid swiftly downward, disturbing not so much as a particle of the soil and decayed vegetation that passed through them in their journey.

When the robot-triggered blasts cushioning the landing of the thing blasted acres of itcl and sent searing energy dozens of feet downward, not a spot of wetness was within range to feel it.

**"SO** YOUR name is George Summers, eh," Black Andrew drawled. "Well, you've seen your last summer. We're going to use you as a guinea pig right now. Later—" He chuckled and turned away.

"Wherever we go you go first," Niels explained. "Now, down the ladder." He gave George's space suit elad figure a shove toward the opening in the ship's shell. The two pirates and four of their crew were in the large airlock.

George saw the weird landscape of the strange world for the first time. His eyes widened in surprise as they took in the unnatural white vegetation, and the brooding ceiling of grey. There should have been only the frost of frozen atmosphere, sharp uneroded crags. This was too far from the heat of the Sun for warmth.

He stepped off the ladder and stood away from it. There was a springiness to the ground. The blades of grass, deathly white, swollen, until they hardly looked like grass, formed a carpet of flat white, uniform except for foot-wide trails here and there where it had disappeared.

"Walk around a bit," a voice up in the airlock ordered. George complied, amused at the caution of these

men who had boarded the ship as passengers in order to kill all on board without warning when they were out in space.

The dark, foot-wide swaths interested George. What had caused them? No mere animal could have eaten the vegetation so completely. One of the trails was partly grown in again.

His eyes were growing used to the sight of the grass. He began to distinguish here and there all stages of uniform growth, as if almost daily—if there was such a thing as day under that gloomy shroud of a sky—some creature mowed its trail of annihilation, gathering its food.

"I'll just tuck that item away for my own use," he decided. "If I'm to get out of this alive it will be by taking advantage of some break in my favor."

Black Andrew, Niels, and the others were coming down the ladder now. They walked across the white meadow until they reached George.

"O.K., Summers," the pirate ordered. "Start walking toward that ship over there."

"What ship?" George asked. His eyes followed the pointing arm of Niels, and for the first time noticed the hill less than three hundred yards away. Its crest was strangely straight, and the curve at either end of its length was too regular. It did look like an outline of a space ship, half covered with white grass that seemed to grow right up to it.

He didn't ask questions. He started walking, his mind trying to puzzle things out. Of course the pirates had been flying in the murky gloom by using the radar screen. On the radar screen if the hill ahead were a space ship it would show brightly white in contrast to the surrounding greys. So the pirates would know that it was a ship. That was quite obvious.

The size of the thing was startling.

It was at least seven or eight hundred feet long! No ship built on Earth had as yet had that length. If this planet were beyond Pluto's orbit it was undiscovered yet. That would mean—

It would mean perhaps that this ship had been built by some unknown civilization—perhaps on the planet itself! That was hardly likely though. If this ship had belonged to a race that lived on this planet they would not have let it remain here to corrode even if it were wrecked beyond repair. They would have salvaged the valuable metals and instruments in it.

**G**EORGE'S footsteps quickened. A sudden shot made his knees buckle. The thought rose in his mind, "So this is it! They just wanted me to walk ahead so they could shoot me in the back!"

In a few seconds he realized he hadn't been hit. He turned to see what had happened.

"What's the matter with you, Niels," Black Andrew exclaimed. "Are you space-crazy?"

"Naw," Niels answered with exaggerated carelessness. "I saw something like an eye on a transparent stalk rise up out of the grass and look at me. I shot at it because I'd like to get a look at whatever critters live in this god-forsaken place."

"Oh," Black Andrew said, relieved. "Get going, Summers." He pointed his gun suggestively at George to emphasize his order. George turned and started toward the hill again.

The absorbant white carpet of grass sloped upward against the space ship—for spaceship it obviously was as they came up to it.

Black Andrew ordered George to start around it toward the right. Eagerly George obeyed. The springiness of the ground was a constant. There seemed nothing to be afraid of.

There was no break in the side of the ship. George kept one eye on it as he followed its side, and one eye on the whiteness of the grass. Ahead of him and to one side he soon saw something like what Niels had seen. He said nothing, but watched it. He felt it was watching them, whatever it was.

It sank back as George came within a few feet of it. The pirates hadn't noticed it.

George reached the end of the ship. The rocket honey-comb was still intact, though much corroded. He decided the ship operated on the same principle as Earth ships, using U305 in a critical frequency magnetic field to disrupt it into protons, neutrons and Alpha particles which in turn disrupted the fissionable elements in the rocket block in a dampened chain reaction.

He rounded the rocket bank and started down the other side of the ship, the pirates a short distance behind him.

Suddenly a terrified scream tore at the air. George whirled around in time to see one of the pirates sinking into the ground. The others were springing back out of danger.

There was no further scream.

"Must be just a pocket of some kind," Black Andrew said nervously. "Are you all right, Grant?"

There was no answer. The gaping hole that the pirate had dropped into gave back only black silence.

"Go over there and see what it looks like, Summers," Black Andrew ordered, having his gun toward the hole.

George complied cautiously. When he was a few feet away he laid down, sliding forward on the smooth plastic of his space suit.

He reached the edge and looked down.

The space suited figure of the pi-

rate Black Andrew had called Grant lay there, several feet down. It was covered with a transparent pool of something that seemed to move as the heat trails move in heating water—only with a purposiveness about the movements.

George thought fast. He could tell what he saw—or he could follow a strange hunch that formed in his mind. He decided to follow the hunch. Inching backward slowly until he was several feet from the hole he stood up and shook his head.

"Better get some ropes and aluminum planks," he suggested. "I think your man is knocked out. The pocket seems to be wider at the bottom than at the top. It might cave in."

"Go back and get more men and some rope and metal planks, Niels," Black Andrew ordered. "And be sure you follow the path we came by so you don't fall in a pocket too."

George watched the giant Niels leave, his thoughts swirling with vague feelings. What he had seen down there should have alarmed him. Instead he had felt a strong hunch to stall for time. Why?

Was that strangely swirling pool that covered the pirate, Grant, connected with the strange stem ending with something suggestive of an eye that had seemed to watch him?

Black Andrew and the three men with him stayed close together, saying little, their eyes roving. George stayed apart from them, busy with his thoughts.

**H**ALF AN HOUR later Niels returned with half a dozen men carrying aluminum beams and coils of rope. Quickly the beams were telescoped together to form one long one. One of the men straddled it in the center with a coil of rope on his arm. Others took each end and lifted it, carrying it until the man riding

it was directly over the hole.

George watched while the rope was dropped into the hole and the pirate slid down it. In five minutes he climbed up and sat on the beam while he pulled his inert load up beside him. Then the men holding the beam at either end carried it away from the hole until they could lay it down.

"He's still out cold," someone said.

"We've had enough for one day," Black Andrew ordered. "Back to the ship."

He ignored George, seeming to have forgotten him. Or perhaps he was sure George would prefer to stay with them rather than wander out across the leprous field on this unknown planet.

George hung behind, still puzzling over what had happened. The man who had gone down after Grant had certainly not seen any pool of wetness or he would have said something about it. Also Grant's space suit had been perfectly dry when he was pulled up.

George was trying to visualize what he had seen in that hole. He would have sworn that Grant's space suit was partly dissolved away and the wetness had filled his suit, but his suit was intact now.

The pirates were walking rapidly in a closely huddled group. George shrugged off his thoughts and caught up with them. They seemed more afraid than happenings warranted.

Inside the ship again, George expected to be rushed into his room and locked in immediately, but still the pirates seemed to have forgotten him. They were intent on getting the unconscious Grant's space suit off, leaving their own on for the time being.

George wanted to slip away, look for a gun or some means of defending himself—make some plan to gain the upper hand over the pirates.

In his mind a strong hunch grew to stay with the pirates—do nothing to attract their attention. It seemed almost more than a hunch.

They were pulling the space suit off the unconscious pirate now. George's eyes widened in horror. The arms, the legs, the whole body sagged in formless flexibility. The pirate's face was losing its shape.

A man near George fell to the floor unnoticed as every eye stared with fixed fascination at the utterly, monstrously flaccid figure—for it was horribly obvious that there was not a single bone in his body!

Black Andrew reached out and touched the man's head. Where there should have been solid bone protecting the brain, his finger sunk in easily.

And the stench of strong ammonia was everywhere.

George fought the nausea that gripped his stomach. The pirate, Grant, still lived. He breathed, though his face was shrunken and shapeless and his chest was flattened out like flaccid dough. His arms, legs, and fingers sprawled in multi-jointed curves.

Then abruptly George's mind cleared. Those around him still retched or stood in stunned immobility or lay fainting on the deck. But George was fully alert.

UNNOTICED, he slipped from the room and went toward the stern section. He had no way of knowing whether all the pirates were in the room he had left or not. He didn't care.

It would be impossible for one man to take the ship up alone. There was little chance of his leaving the planet alive. So far as he was concerned there was still no hope of escape.

He reached the control room for the stern rocket tubes where he had

held out for five days before falling asleep. No one was around.

He pulled the rod clamp loose from the welding cable and stopped in front of the bank of six meters that felt the pulse of the rockets when they were in operation.

A voice in his mind screamed for him to smash them. He hesitated. He knew why there were no spare meters aboard. Those meters were carefully balanced to their circuits. Only a specialist could install new meters, and then only with elaborate precautions. If he smashed those six instruments now it would mean that not only would the pirates be doomed to remain on this planet, but his own last hope of escaping would be gone irrevocably.

"While there's life there's hope," he muttered, smiling wryly. He hefted the copper clamp in his plastic glove and brought it forcibly against the first meter. The glass tinkled noisily. The white face and delicate black needle caved in.

Five more times he brought the copper clamp down. The meters were smashed. The only way the ship could fly now would be to bring out equipment and experts found only on the Earth, three hundred billion miles sunward!

He twisted the rod clamp back into its tapered hole in the welding cable. Then he left the control room and returned to the room where the pirates were still huddled together, staring at the pitiable lump of flesh that had once been a man.

It was conscious now—or at least semi-conscious. Its boneless limbs were moving in feeble attempts to rise. The flaccid, skull-less head was contorting in attempts to speak or to lift. Muscles that had no bone anchor to work against were jerking against one another in ineffectual, nightmarish movement.

"Black Andrew!" George said loudly, his voice confident and filled with humorous contempt. It had the effect of the sound of a shot in the room. Every head turned his way.

"You'll never get off this planet now," George calmly informed them. "This is really better than sending you all out into space. I just smashed the rocket control meters. You know what that means. If you start up the rockets you'll turn this ship into an exploding atom bomb before you can get it off the ground!"

He had planned in his mind to laugh at them after making this announcement. He expected them to shoot him at once. He wanted to go down laughing at them.

Instead, he looked at the thing that had been Grant, the pirate, its mouth working like some monstrous creation of a mad imagination, the face sunken down deeply under a bulging lump of brain encased in skin.

Then he shoved his way through the still dazed pirates to the door to the airlock. He didn't look back. With each step he expected and hoped for a shot in the back that would kill him.

At the airlock hatch he looked back. He wondered how these men had ever had the daring to capture a ship and kill the crew and passengers. He wondered how Black Andrew had gained his interplanetary fame as the most feared outlaw of all times.

When he pulled the hatch cover closed he knew he was seeing these men for the last time.

**T**HE FLARES had gone out, leaving the landscape dark and still.

The white dullness of the grass outside the ship seemed self luminous—identical in color and lighting with the white paint on a luminous dial of a clock.

He had nearly reached the looming blackness that was the mysterious, other-world ship, when he heard a shout behind him. He turned and watched as a figure ran toward him.

"Wait," the figure shouted hoarsely. "Wait!"

George waited. It was impossible to recognize the person in the darkness; but as the man came closer he recognized his voice as that of Black Andrew.

"Look, Summers," Black Andrew said, coming to a stop. "We know you must have figured out some way to get off this planet or you wouldn't have broken the meters and walked out of the ship. What'll you take to get us off."

"What'll I take?" George echoed. "What've you got?"

He turned away.

"Wait," Black Andrew said, hanging onto his arm. "I've got things hid away. A few millions hid on Mars. A few more on the Earth. Take me with you and I'll draw a map so you can find it all. I don't want any of it. You can have it."

George shrugged off the pirate's hand and walked on toward the black shape ahead.

"Stop!" Black Andrew's voice was harsh, commanding. He was again the pirate chief. George stopped and turned back. The pirate held his gun pointed at him. "All right," he said. "I've given you a chance to make a lot of money by taking me with you. Now I'm through bargaining. You'll agree to take me with you or I'll kill you right here."

"Go ahead," George said. "For God's sake, man. There's no way off this planet. I wish you would shoot me. That would be a much better way to die than like that—thing back there on the ship."

Suddenly Black Andrew dropped from view. A single, terrified scream

followed his disappearance. Sickened, George turned his back on the spot where he had been and walked on toward the ship that was half covered with the faintly luminous grass.

He looked at its outline closely. If it were built like the Earth ships any opening into it must be buried, and about at the spot where Grant had fallen through.

There was another of those queer hunches strong in his mind that if he dropped down into the hole where Grant had been he would find it easy going to such an opening. If it weren't, he would simply be stuck and remain buried until his oxygen gave out or he was made boneless by the mysterious wetness that he had seen covering Grant.

"That same thing is happening to Black Andrew now," he thought, shuddering.

**H**OW HAD it been done without puncturing the space suit—or had the space suit really been dissolved as it had appeared when he saw it, and in some mysterious way been reformed afterward, before they pulled him up? That strong ammonia smell when they took him out of his space suit indicated that there had been some way for the ammonia filled atmosphere and moisture to get in.

And what about his strong urge to say nothing and delay things? It had taken time to dissolve the bones out of Grant—assuming they had been dissolved out.

And why was he out here now, walking confidently toward this ship from some unknown world, following a hunch that seemed to speak from outside his own thoughts, peremptorily? Why did he feel so sure that if he fell into the hole Grant had fallen into he would find a tun-

nel to an opening into this giant ship?

"I know why," he muttered half aloud. "The human mind refuses to accept death. All this is a subterfuge of my mind to avoid the acceptance of death. Superficially it accepts it and wishes for it. That's why I really hoped Black Andrew would shoot me. But deep in my subconscious I'm building up a fantastic hope that in this ship I will find something to help me escape."

He rounded the stern of the ship and started toward the spot where Grant had fallen in. He could see the place in the half light the faintly luminous expanse of grass torn and trampled, leaving splotches of darkness in the white blanket.

Without hesitation he walked toward the spot of black where he knew the hole was. When he reached it he jumped feet first, trying to miss the sides so that he wouldn't start a cave in that would cover him up.

He landed with enough force to bring him to his knees. Straightening up he felt around in the absolute darkness, his plastic gloved hands brushing against the sides of the pit.

He felt in the direction of the ship. A surge of exultation flowed into him as his hands encountered the sides of a narrow passage leading from the pit. Stepping boldly forward he let his hands guide him—ten feet, twenty feet. Behind him he heard dirt falling in, sealing off his escape.

Something wetly glistening appeared on one wall of the tunnel, and withdrew. Then his helmet thumped against something solid and metallic. He had reached the underside of the ship!

Simultaneously a light flashed into existence ahead of him, coming through what must be an opening into the strange ship.



**T**HERE was freshly broken scale along the edge of the opening, indicating that the hatch had been closed a long time and had just recently been opened. George climbed the short ladder and stepped inside. The ladder pulled in. The hatch cover closed with a suggestion of invincible, controlled force, that gritted scale to a powder, yet brought the cover closed with a gentle touch.

The airlock was large enough for a hundred space suited figures to enter at once. George crossed to another door and opened it. Then he did a double take and examined the door more closely. It was almost standard in design. It was designed for the use of human beings!

Thoughts rushed through his head as he explored the almost familiar passages and rooms of the huge ship. The eeriness of the planet, the strangely bleached grass, the terrible thing that had been done to Grant, and the size of this ship, had led him subconsciously to take it for granted that the beings who had built this ship and brought it here must be alien in form—perhaps something unimaginable. But everything seemed built for humans.

The distance from deck to ceiling was about seven and a half feet. Details of construction were seemingly standard. Welded joints were conventional. Rivets were standard.

George reached in to one of the pockets of the suit and brought out the air analyzer kit. He spread out the twelve small, chemically treated papers and vial of distilled water. A drop of moisture went on each paper. On each of them the wet spot assumed a color that matched the test color strip along the edge of the paper. The air was normal!

George shut off the air in his suit and took off the helmet with a sigh of relief. He wished he had thought

of testing the air back at the airlock. Then he would have taken his suit off and left it there.

He found that his exploration had led him sternward. He realized suddenly what the reason was. He was searching for the rocket control room to see if its instruments were intact.

Shortly he found it. The lettering on the meters was the only alien thing he had encountered so far. There were fourteen meters on the bank. But now he discovered why the ship had been left here. The trigger wire meters showed zero. The ship had run out of U305, without which it could not move! And besides the usual supply, there was a huge shipment of it on board the Silver Bullet, where the pirates were.

There was an audiovid directly above the meter bank instead of to one side. The screen on it was twice as large as the standard for Earth ships. George flicked a small toggle switch on it.

"Hello!" he said. "Is there anybody on board?"

**T**HERE was no answer. George chuckled, wondering what his reaction would have been if a perfectly normal voice had answered and given the English, "I say, are you there?" or maybe a good old American, "Hi!" He took one last look around and left the small compartment.

He wandered idly, looking into everything he came to. He went from one deck to another. Gradually he became aware of a feeling that he was on the verge of a great discovery of some kind. His footsteps quickened, seemingly guided toward the forward end of the ship.

He thought of a story he had read once of a similar ship—only it was a derelict in space. There had been tiers of majestic supermen in suspended animation, waiting for the

hero to come and wake them up. There had been a beautiful goddess that the hero had fallen in love with. He chuckled and decided he would settle for just the sleeping supermen and be content to go back home to just plain Helen, the most wonderful girl in the Universe!

That was the way life was though, George mused. In stories the hero met the beautiful girl and rescued her from the villain. The pirates were true-to-fiction, but there had been only men on the Silver Bullet—no beautiful, courageous damsel to spell him off while he tried to send the ship into interstellar space, and for him to kill all the pirates for, to wipe the ugly smirks off their faces as they gazed lewdly at the fair damsel's beauteh.

There wasn't even any hope as there would be in fiction. It was no more possible to get this ship off the ground and into space without a well trained crew than it was the Earth ship. It wouldn't do to work with the pirates and escape the planet. They would kill him as soon as they got into space and then go their way, killing and stealing.

The situation was still hopeless—unless, of course, there actually were sleeping giants in suspended animation, waiting for him to come along with his arms full of spools of U305 to wake them and tell them rescue had finally come.

Chuckling at the absurdity of the mental picture, George dropped down to the next deck, not wondering what had made him decide to do that instead of continuing along on the one he had been on.

The creature that stood there waiting for him was perfectly transparent, ovoid, glistening with the lustre of richly transparent plastic. It rested on the deck, on the other side of a partition of plastic glass that sealed

off the two sections of the compartment.

GEORGE became aware that he was not breathing. He took a deep breath. His eyes left the strange, jewel-like thing and surveyed the rest of the large room. There was an airlock, open to the outside. The light from the room penetrated outside, half lighting glistening wetnesses that moved and shimmered just at the edge of darkness. A thought formed in his mind.

"I'm sorry I cannot speak your language yet," the thought seemed to say. "I can speak audibly, and will learn your language shortly. I have read the minds of you and your companions and become aware of what transpires. With your help we, and you, can escape this planet, Andron, and leave the pirates here to their fate."

"Are you one of the beings who landed this ship here?" George asked.

"Yes," came the answering thought. "We have read in your mind of the U305 wire spools on your ship. We must obtain them, and also much food from your stores on board. Then we can leave here and take you to the Earth."

"But how can I do that?" George asked, thinking of the pirates still on board.

"You are to return to your ship," came the thought voice. "We will put it in the mind of Niels to pretend to play along with you. You will tell the pirates of this ship. They will transfer the U305 and their food stores to this ship. Then we will take care of them."

George shuddered at the memory of how these beings had "taken care of" Grant.

"We are starved for Calcium," came the answer. "But you needn't fear us."

George's eyes sought the darkly moving wetnesses outside the open lock on the other side of the plastex barrier that divided the room, keeping the ammonia tainted Andron air away from him. Andron!

"You called this planet Andron," George said. "Is that its name?"

"That's what we christened it when we landed long ago," came the answering thought.

"Long ago?" George echoed aloud. "How long ago? Are you the original passengers on this ship or their descendants?"

"Many thousands of years ago," the answer came. "We are the originals. Death is impossible on Andron. The same forces that feed the internal fires send out the Life force that prevents protoplasm from dying."

George turned and left the room. He retraced his steps to the airlock by which he had come into the ship. Fitting his helmet back on he went through the airlock. The tunnel was gone. There was now a narrow cut through the Andronian soil leading up to the surface.

He rounded the ancient ship, walking with bold confidence. He wondered briefly why he felt such implicit trust in such alien things that were able to do such horrible things to a man. He wondered if perhaps he weren't hypnotized, and losing something far worse than the pirates or the Solar System.

Somehow he couldn't believe that. These transparent beings were too far advanced to be inimical—and they were starved for Calcium.

He reached the foot of the ladder leading up into the airlock of the Silver Bullet...

**T**HE METER for number five rocket fluctuated a little. Automatically George Summer's hand did the necessary things to the remote

control keys to sooth the meter needle.

He started to hum to himself. The memory of the pirates, roped together for safety, falling altogether into a pit on their last trip back to the Silver Bullet and the memory of their last, terror-filled scream, would be something he would never forget. He started to hum again, forcing the unpleasant memory away.

Everything had worked just as the strange being had said it would. Niels had welcomed him with open arms on his return and been overjoyed at the news that he had found an entrance to the other ship. The pirates had seemed almost too eager to transfer the spools of U305 wire and the stores of food from the Silver Bullet to the other ship.

They had made trip after trip, tied together so that if one fell into a hole the others could get him out quickly. The alien things had not been in evidence. The pirates had explored the huge ship from one end to the other and satisfied themselves it would navigate.

The last trip back to the Silver Bullet had been to seal it up so that they could return later with the technicians and instruments to repair the meters—and to carry out the still breathing, pitiable thing that had been Grant and dump him unceremoniously on the leprous carpet of grass.

Weak mouthing sounds had come from Grant. The pirates had jeered at him and turned toward the huge ship, ready to complete their last journey to it.

He had been several yards ahead of them, too disgusted with their behavior toward what had once been Grant to pause and wait for them.

He had heard their concerted scream and turned to see them vanish into the ground. He had boarded the

ship alone and closed the airlock. Then he had gone to the rocket control room and operated the remote control mechanisms that loaded the U305 spools and threaded them into their feed mechanism.

He had watched the meter needles creep up to the mark on each dial that indicated minimum fire potential in the rocket tubes. Shortly after that the ship had blasted free of the dirt that had piled up around it and lifted into the atmosphere.

Soon now the ship would be in a free flight trajectory that would carry it without further attention to within a short distance of the Earth. Then he would be able to leave his post and start learning more about the protoplasmic things that were guiding their ship toward Earth.

"Thank God the pirates won't live long in that ammonia tainted atmosphere," he thought. "They will be out of their misery—probably are already. Even though they killed everyone on the Silver Bullet I wouldn't want them to suffer long."

Something that the strange thing had "said" to him rose in his mind. "Death is impossible on Andron."

"Oh my God!" George exclaimed aloud in horror. "They'll be that way forever if that's true!"

"Quite correct, George," a voice

came out of the audiovid speaker. The screen was blank. "You may shut off the rockets and come forward to meet us now. Be prepared for a shock. We have changed."

"Changed?" George echoed. Grim lines settled into his face.

"So now they are in space they no longer really need me," he thought. "And they're hungry for Calcium."

His eyes searched frantically for a welding outlet. There wasn't one. There was no loose object that could be used for a hammer to smash the meters. There would be nothing this time except to let the next harmonic build up and turn the ship into an atomic furnace.

"I think I would prefer to see you over the audiovid first," he said.

The screen came to life. In it George could see a pilot room very similar to the one on the Silver Bullet. It seemed empty. Then slowly something moved into the screen.

George looked, full realization and horror sickening him to the core. He knew now the real fate of the pirates left on Andron, with no food except bleached grass. Immortal, unable to die, on a planet devoid of Calcium.

The thing in the video screen—the thing that he had seen once before as a blob of wetness, intelligent, sentient—was now a man.

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# The BEES of DEATH

By ROBERT MOORE WILLIAMS

**Featherstone was a dangerous man —  
and the strange globe was a deadly weapon.  
What would happen if they combined forces?**

THE BEGINNING was commonplace, stodgy, unimaginative. Necessarily this story must start with a man digging a ditch, a dull, uninspiring, back-breaking task. This was what Zeke Tuttle thought. He was digging the ditch.

Zeke Tuttle would have preferred to be off fishing, or just loafing in the shade, or doing anything except dig a ditch, but Professor Featherstone wanted the ditch dug, and Zeke, caught without a dime to his name, had agreed to dig it, a fact which he now regretted. It was a hot afternoon and the June sun was broiling down. Added to the discomfort from the hot sunshine was the fact that the ditch had to be dug in hard-pan.

Zeke called it hard-pan. In reality it was glacial till, although Zeke didn't know this. In the long ago, a retreating glacier had deposited clay, pebbles, and small stones here, and this combination had formed into a compact mass almost as hard as stone. Zeke had heard of glaciers but he did not know there had ever been any of these huge beds of ice here in New York state. If anybody had told him that 25,000 years in the past the rugged hills surrounding him had been covered with ice a mile thick, Zeke would have called the man a liar.

"Ain't never been that much ice nowhere," he would have said.

Scientific facts had not yet penetrated to the circles in which Zeke

moved. One fact, scientific or otherwise, came home with a bang when Zeke's pick uncovered what looked like a cannonball in the bottom of the ditch he was digging.

Finding the cannonball pleased him. Professor Featherstone might give him a dollar for a genuine cannonball. Zeke had no idea how a cannonball would get buried under three feet of glacial till.

"Maybe it was shot here in the Revolution," he thought, bending to pick it up.

*Swish!*

THE CANNONBALL didn't wait for him to pick it up. It jumped out of the ditch on its own accord. It leaped ten feet into the air, then looped outward and gently came to rest on the ground.

Eyes almost popping out of his head, Zeke stared at it. He had no difficulty in deciding what he was going to do. "Run!" his legs said. He hopped out of his ditch like a rabbit smoked out of its hole, and headed for a patch of trees nearby. For a tall, gawky, ungainly individual, he got up remarkable speed in a short distance. Panting, he dived behind the nearest tree.

He thought he had jarred the cannonball with his pick and it was going to explode. He waited for the explosion. It didn't come. He poked his head around the tree and looked back.

The ball lay on the ground where



The object looked like a cannonball, and Zeke was amazed as it suddenly shot into the air . . .



it had fallen. Zeke watched it for several minutes. Cannonballs were equipped with fuses, he knew, and the fuse in this one might still be burning. He waited ten minutes.

"If she was goin' to explode, she would have already done it by now," he thought. He went back to the ball.

It lay on the ground. He nudged it with his shovel, rolled it over looking for the fuse hole.

There wasn't any hole for the fuse.

The ball was made of lead, he saw. Black lead. The metal had crystallized from age but it was obviously lead. Zeke looked down in the ditch. There was a round pocket where the ball had lain.

He scratched his head.

"Now how in the heck did that thing jump out of that ditch?" he wondered.

He walked around the ball several times, staring suspiciously at it. He stirred it with his toe, rolling it over and over. Since it showed no inclination to do any more jumping, he ventured to pick it up. He got another surprise.

A ball the size of this one, made out of solid lead, ought to have weighed thirty to forty pounds. When he lifted it, Zeke expected it to weigh that much.

It didn't weigh five pounds.

"Must be holler," he thought. He shook it to see if he could hear anything rattling around in it. Nothing rattled. As to what he was going to do with it, there was only one answer: sell it to Featherstone and make himself a buck or two. The professor had been known to buy Indian arrowheads, stones, axes, and knives from farmers who had picked them up in their fields.

Carrying the ball in his hands, he started up the slope of the hill to the house owned by the professor.

"I'll see if I can touch him for five bucks," he decided.

**T**HE HOUSE Featherstone occupied was built on a hillside and was hidden from casual view by a heavy growth of trees. If it had been on level ground it would have been four stories high, but since it was built on a hillside it never managed to reach a greater height than one story. On the first, or lower, level there was a garage, with space for three cars. On the next level, up and farther back on the hillside, was a large dining room and a kitchen. On the third level was a large living room, four bedrooms, and a bath. On the top terrace was a glassed-in compartment designed by the builder as a combination solarium and look-out point.

The man who had built this house had been teched in the head. After Featherstone had finished with him, he had been teched in the pocketbook. In point of fact, to show his profuse admiration for the worthy professor, he had deeded the house and several hundred surrounding acres of hills to Featherstone as an outright gift.

Featherstone had his converts.

Featherstone liked this house. It gave him a place to spend a few restful weeks or months when the heat was on in New York. He also liked it because George Graham did not know about it. From Featherstone's point of view, a hideout that George Graham did not know about was a most desirable thing. Most desirable indeed!

Featerstone was a strange man. If he had been born in central Africa, his calling would never have been in doubt. He would not have been a hunter, a stalker of antelope, a bringer of food to the tribe. He would not have been a fighter, meeting the enemy face to face, a protector of the people. Nor would he have been a worker, a tiller of the soil.

He would have been a witch doctor. The hunters, the warriors, and the



tillers of the soil would have brought tribute to him. He toils not, neither does he spin; yet he lives on the fat of the land. A witch doctor, with his face hidden behind a hideous mask, a necklace of lion claws, a cow's tail in one hand and a sack of *grigris* in the other, a worker of dark magic, with fear his chief assistant, and delusion and deceit his stock in trade. Born in central Africa, Featherstone would have been a witch doctor. And he would have been powerful. Whole tribes would have held him in awe, obeyed his commands, served his dark purposes.

If he had been born in Europe in the middle ages, he would have been an alchemist, a master of subtle poisons, with a secret laboratory hidden in some dark cave or cellar, and in this laboratory he would have sought what so many were seeking in that time—a way to transmute base metal into gold.

In yet other places and other times, he would have been a wizard, a warlock, a magician, trafficking with dark mysteries. And his fate, if caught with the goods, would have been to be broken on the wheel, to be hanged, drawn, and quartered, to be boiled alive in oil. But the odds are he would never have been caught with the goods.

In America, in the Twentieth Century, Featherstone was neither witch doctor, alchemist, nor magician, although he possessed an extensive knowledge of the practices of these trades. Nor was he an astrologer, a fortune teller, or a cultist. He knew the secrets of the astrologer, the inner workings of the crystal ball, and how to organize and run a cult on the right side of the law. He was not a spiritualist although he could manage ectoplasm with the best in the business.

There is no one word that could

describe Featherstone. He was anything. Although his primary aim was to separate a sucker from ten thousand dollars, he was also willing to separate a sucker from five dollars. If a marked deck of cards would do the job, he used a marked deck of cards. If astrology would handle the separation process, he used astrology. If he found some rich individual—preferably a rich widow—who went in for spiritualism, then he brought out his spirits, changing his methods according to the weakness of his victim. He had no scruples, no morals. Honesty was something he liked to find in other people.

This was the man to whom Zeke Tuttle hoped to sell what he thought was a cannonball.

**Z**EKE FOUND the professor relaxing in the shade of a tree on the highest level of his house, the solarium. He was seated in a heavily padded reclining lawn chair with a tall, cool glass handy to his right hand and a book written by a Hindu philosopher open in his lap. There was a rich widow in Pittsburgh who was interested in Hindu philosophy, Featherstone was reading up on the subject.

Zeke approached, holding the cannonball behind him. "Professor?" he said diffidently.

"What the devil are you doing up here?" Featherstone demanded, noticing his employee. "I hired you to dig a ditch. Why aren't you digging it?"

"I been diggin'," Zeke defended.

"I didn't ask you whether or not you have been digging. I asked you why you're not digging now. I'm paying you to do it, am I not?"

"Yep. You're payin' me."

"Good wages, too. Better than you could get anywhere else."

"Wages are all right," Zeke answered. He was beginning to squirm.

City folks had funny ideas about work. When they hired a man they expected him to work from starting to stopping time without taking any time off. Country workers, on the other hand, are accustomed to take time out to rest when they feel the need. In leaving his job, Zeke had not been conscious that he was violating the code governing capital and labor. According to his lights, it was quite all right for a hired man to take time out to go tell the boss something. The fact that he was trying to *sell* his boss something made no difference.

"Well, what are you standing there for?" Featherstone demanded. "What do you want?"

"You wanta buy a cannonball?" Zeke answered, thrusting the object toward him.

Featherstone was a tall man, and even sitting down, an impressive one. He had manner, bearing, sangfroid. In his various occupations, these characteristics were useful. He also had hard black eyes that could turn gimlets to shame.

"A cannonball!" For a moment even Featherstone was surprised. A cannonball was about the last thing on earth he expected to see and certainly the last thing on earth, in heaven, or in hell he expected to buy.

Glancing toward the object his employee had thrust toward him, he saw that it *did* look like a cannonball. He could also see that his employee was trying to sell him something that was already his own property. For someone to sell him something that already belonged to him would irritate him exceedingly. He could see bits of dirt clinging to the cannonball which indicated that it had come from the ditch being dug on his land. Promptly, he moved to the attack.

"A cannonball, eh? Nonsense. How would a cannonball get here?"

"Maybe shot in the Revolution,"

Zeke suggested.

"Ridiculous. No battle was fought within fifty miles of this spot."

"Maybe the Indians brought it here," Zeke volunteered. He was feeling a little better. His employer seemed to have forgotten that he was supposed to be digging a ditch.

"Now what would an Indian be doing with a cannonball?" the professor scoffed.

**Z**EKE COULDN'T answer that question. "Well," he hedged, "It's a cannonball anyhow, no matter how it got here. You wanna buy it?"

"Where did you get it?"

"Found it."

"Where did you find it?"

"Over that way?" Zeke gestured vaguely toward the little valley where he had been digging. He knew as well as Featherstone where these questions were leading. If he admitted finding the ball in the ditch, the professor could claim it.

"What do you want for it?"

"Five dollars," Zeke answered promptly.

"It's not worth the price but I'll take it." Featherstone pulled a wallet from his coat pocket, and carefully concealing its contents from the inquisitive eyes of his employee, extracted a five dollar bill from it. He took the cannonball from Zeke's willing hands.

Zeke reached for the bill.

Featherstone snatched it out of his grasp. "I said I'd *take* it, not *buy* it!" he roared, leaping to his feet. "You idiot! Do you think I'm a big enough fool to buy my own property from you?"

"I—" Zeke was startled out of his wits. When the money had appeared, he had thought the sale completed. He now perceived it was not completed.

"You found this cannonball on my property!" Featherstone thundered.

"I—"

"Answer me. You found it in the ditch you were digging!"

"Y—yes."

"Then it belongs to me. Now get the hell back to work. Do you think I'm paying you to loaf around up here in the shade?"

Zeke knew he was licked but he made one last desperate effort to trade.

"Finders keepers," he argued.

"Finders keepers the devil!" the professor snorted. "Anything found on my land belongs to me. I could have you put in jail for trying to sell me my own property. Now get back to work before I dock you for the time you have wasted up here. Get moving. Do you hear me?"

Zeke heard him. He was already moving. Featherstone's laughter came to him as he went down the slope. He was so irritated that he did not tell Featherstone how the cannonball had jumped out of the ditch when he uncovered it. Secretly he hoped the ball would explode and blow Featherstone to hell and gone.

It was a false hope. This ball had never been designed to explode. Quite the contrary.

At that moment, fate must have been sitting back in the wings laughing at the human race. A ball that a ditch digger had found buried in glacial till, a ball that looked like a cannonball but certainly wasn't a ball, that had leaped from the ground of its own accord when freed of the restraining soil, a ball encased in a quarter inch of lead, was in the hands of a man who was potentially the most dangerous crook in the United States.

**F**EATHERSTONE saw at once that this was not a cannonball. Through a crack in the lead, he could see something glistening. He cut the lead away, using a pocket knife.

Amazement showed on his lean dark face as the object inside the lead came more and more to light.

It was a sphere, of a size that could easily be held in two cupped hands. It was made of a transparent plastic substance that was harder and tougher than any glass he had ever seen. The point of his knife would not even scratch it. Clearly visible inside the plastic, crossed and criss-crossed like the multitudinous threads of a tangled spider's web were—a maze of tiny wires connecting equally tiny instruments

"A radio set!" he thought. "A radio set in a crystal ball!" Then he shook his head. The instruments inside the sphere looked like they belonged in a radio set but they resembled no radio assembly with which he was familiar. And, among many other things, he had an excellent working knowledge of radio.

The tiny wires all ran to a central core which was about the size of a baseball. This core was black, blacker than the blackest night, so very black that in comparison the best grade of commercial paint would have seemed a drab affair. In that blackness were—lights. Millions of lights, an uncounted multitude of lights. Microscopic, almost atomic in size, they danced like incredibly tiny fireflies winging through a summer midnight.

Take a million fireflies and compress them to the size of a baseball. Take their beloved darkness and compress it until it becomes the essence of a thousand midnights. That was the picture of the dance going on inside the sphere and of the blackness in which the dance was taking place. Microscopic fireflies at midnight!

Featherstone frowned in perplex-

ity. "This is marvelous workmanship!" he thought. "Marvelous, indeed."

"Thank you," a voice whispered in his mind.

The sphere had talked back to him!

Featherstone had found a crystal ball that actually worked! Or possibly the ball had found him. It was hard to know which. One fact was clear. A man who was potentially dangerous had in his possession a device that was potentially deadly.

**T**HE GIRL was frightened, George

Graham saw. She was clutching the cardboard box as though she was afraid it would blow up in her face. The furnishings of the office seemed to make her feel a little less frightened. Graham sighed. He wished to hell that sometime he would get a client who didn't pay attention to how the place was furnished. What was it about the human race that made them suckers for an Oriental rug, mahogany furniture, indirect lighting, and a couple of good paintings? Sometime he was going to open an office with nothing in it but a plain pine table, unpainted, two uncomfortable chairs, and a—yes, by Harry!—and a spittoon; and the client who didn't like the furnishings could get the hell out and stay out.

He rose to his feet. "There is nothing going to jump out of the closet at you, there are no trap doors, I am not going to hypnotize you or give you drugs. In short, you are safe in this office as you would be in your grandmother's parlor. So sit down, Miss Chambers, and tell me what you have on your mind."

She forgot her fear in a hurry. Anger replaced it. She had violet eyes. Flames blazed in them.

"I beg your pardon, but—"

"But you are accustomed to having

everyone treat you as if you were sugar or salt and might melt if left out in the rain. You are accustomed to having everyone treat you with all the respect due your father's millions. When you enter the presence of a private detective, you expect that uncouth person to leap to his feet, bow from the hips, ask how he may serve your highness."

That ought to fix her, he thought. She ought to swish out of his office with her nose in the air after that speech.

Graham had two reasons for being insulting. One, he was not interested in talking to curiosity seekers. He didn't have time to waste on people who were looking for a thrill. His second reason was more obscure but none the less real. If you insult a frightened person, their fear will sometimes be absorbed in anger and forgotten.

He waited for this girl to react.

She just looked at him. She didn't bounce out of the office. The violet eyes went searchingly, even hungrily over his face. Graham would not have taken a prize in a most handsome or best-dressed man contest but the girl seemed to like the rugged strength she found in his face. Suddenly she sighed, and sat down. Wilted down, rather, as though her legs would no longer support her.

"Thank you," she said. "I admit I was—terribly frightened. You did just the right thing to save me from hysteria."

Graham stepped quickly around his desk. It was his turn to be surprised. She had understood why he had talked to her as he had. Not one woman in a thousand would have understood. He decided he liked this girl.

"Sorry," he said, all harshness gone from his voice. "Will you have a cigarette?"

From the thin gold case which he extended toward her, she took a cig-

arette. He lit it for her.

"Now Miss Chambers," he said. "What can I do for you?"

"You can tell me what to do about this." She handed him the cardboard box she was carrying.

It was a shoe box, Graham saw as he removed the paper in which it was wrapped. The girl watched him from frightened eyes as he took off the lid.

Inside the box was a rabbit. A wild rabbit, with long ears and brown fur and a white tail. A common cottontail rabbit. Dead.

THE CLIENTS of George Graham had brought many things to him. They had brought him little dolls with needles thrust into them, they had brought him voodoo charms from Haiti, they had brought him great ouangas that had originally come from Africa. Idols from Tibet, prayer wheels from China, decks of magic cards from Harlem, all the paraphernalia of superstition, of almost all of it, that the human race has invented. And it has invented plenty!

But no one had ever brought him a dead rabbit in an empty shoe box.

"What kind of a joke—"

The fear on the girl's face stopped him. He swore silently at himself. The black and diabolical designs of superstition may seem silly from time to time but they are never a joking matter. Graham told himself he was old enough and experienced enough to know better than to think someone was playing a joke.

"What is this?" he said.

"A—a rabbit," the girl answered.

"I know. But what else is it?"

"That's—that's what I came to you to find out. You—you specialize in this sort of thing, don't you?"

Graham groaned. "I specialize in exposing fake mediums, fake fortune tellers, fake spiritualists, the trick-

sters who prey on unfortunate and unhappy people. I do not know what there is to expose about a dead rabbit."

"Look at the rabbit."

"What?"

"Examine it closely. Take it out of the box. Here. Let me—"

Graham caught her wrist, shoved her hand aside. "Let's not touch it unnecessarily," he said. "Wait just a minute. I'll get some gloves."

He went into the next room. There was a laboratory in that room, as complete a laboratory as any in the city of New York. He stayed only long enough to take a pair of rubber gloves from a storage cabinet.

He used these to lift the rabbit out of its box. He set the rabbit on a piece of paper on his desk.

"Now look at it," the girl said.

He saw what she meant. The rabbit sat naturally on its four feet. There was a suggestion of motion about the little animal. Graham got the impression that this rabbit had been ready to hop when something had happened to it. Instead of moving, the rabbit had been frozen in a hopping position, frozen solid instantly, all motion stilled in the fractional part of a second.

The rabbit had never known what had hit it. There was no indication that it had been fleeing for its life, its fur was not disarranged, and no blood spots were visible. It crouched on his desk ready to hop.

It would not hop again, not ever.

Graham ran gloved fingers over the furry body. The rabbit was as stiff and as solid as bone. He shrugged, slipped it back into its box, turned to the girl.

"Did you ever see anything like that before?" she asked.

"Never," he answered.

"What do you think it is?"

"I haven't the faintest idea."

Disappointment showed on her face. She had come to him for help and he wasn't doing anything for her. "I thought—"

"You thought all you had to do was to set it on my desk and I would be able to tell you all about it?"

"Something like that," she admitted.

"Thanks for the compliment. I'm neither a superman nor a mental wonder. There are many things I don't know. I don't know, for instance, where you got that rabbit."

**H**E DIDN'T add that he didn't know enough about her to satisfy him. The Mildred Chambers of the rotogravure section, the Mildred Chambers of the society pages, he knew vaguely. She was a glamour girl, with more money than was probably good for her. She got her picture taken at the Stork Club now with this man, now with that. She lived in the frothy bubble of society, in the false, unreal world of the ultra rich. This much he knew about her from casual reading of the newspapers but the real Mildred Chambers, the little girl hidden away somewhere behind the false front of the social glitter, he did not know.

He was having the devil's own time connecting the Mildred Chambers, the girl in the ermine wrap whose photograph he had seen in the picture sections, with this frightened, violet-eyed girl sitting in his office, this Mildred Chambers who had brought him a dead rabbit in a shoe box.

He could imagine what a Broadway columnist would make of this situation. He thought of the headline:

#### SOCIETY GIRL CARRIES DEAD RABBIT IN SHOE BOX

The thought shocked him. It was so fantastic it was utterly horrible.

A society girl carrying a dead rabbit around in a shoe box. This in New York City, in the greatest metropolis of the modern world, in the very home of sophistication, in 1949!

Privately, Graham knew that this sophistication was only a thin veneer, that just under the surface of this modern world the old fears of the human race could be found, the fear of the dark, the fear of the jungle, the fear of the evil eye, the fear of plain bad luck. Civilization had veneered man; that was all it had done. Under the skin of New York were all the old, old fears of the race.

"Where," he repeated, "Did you get this rabbit?"

"I found it in my apartment this morning," Mildred Chambers answered. "I called you immediately."

"And where is your apartment?"

She gave an address on Park Avenue. Graham knew the building. It was one of these ultra-expensive places.

"We live on the eighteenth floor," she continued.

On the eighteenth floor of a Park Avenue apartment building she had found a dead rabbit! She lived so high up that the noise of the street did not reach her. She lived up in the clouds almost, in a world set apart from humble dwellers on this earth. She lived in a building of brick and steel, surrounded by asphalt streets and concrete sidewalks. Up eighteen stories in the air in a steel and concrete building she had found a dead rabbit. No wonder she was frightened.

"Where in your apartment did you find it?"

"In my father's room."

"Ah. Your father is Whitman Chambers, III?"

"Yes."

"Where in your father's room was the rabbit?"

"Hidden in a drawer of his dresser.

One of the maids found it and brought it to me."

"Ah."

GRAHAM THOUGHT what a Broadway columnist would make of this. In the dresser of Whitman Chambers III, wealthy sportsman and descendant of original New York settlers, a dead rabbit had been found. That would be a juicy tidbit indeed. Had the family tree of another original settler developed a nut? Had Whitman Chambers III quietly gone crazy? Keeping a dead rabbit in a dresser drawer was scarcely the activity of a sane mind.

"It isn't that," Mildred Chambers said hastily. "Daddy is as sane as—as you or I. I'm positive of that."

"Did I say he wasn't?" Graham questioned.

"No, but you looked it."

"And you're afraid of it!" Graham challenged.

"What?"

"The first thing that popped into your mind when that rabbit was found in your father's room was the thought that your father was going insane."

"No!"

"Isn't the fear that your father is insane the thing you are most afraid of?"

"No, Mr. Graham. My biggest fear is that he is *not* insane!"

Graham walked around his desk, sat down in the chair, and leaned back. The violet eyes of the girl never left his face. The only sound in the room was the soft rustle of the air conditioning apparatus pushing cool air into the room to combat New York's August heat. On the street far below, the honk of a taxicab sounded like a noise from another world.

"If he were insane, you would not be afraid?" Graham said.

"I would be terribly sorry," she said simply. "But I would not be afraid."

He believed her. And he shivered.

Out of the corner of his eyes, he was aware of the shoe box sitting on his desk, of the box and of its contents. He felt the cold spidery feet of a nameless dread walk up his spine.

"My father has always been interested in the supernatural," Mildred Chambers continued. "He has an extensive library on the subject. I can't remember a time when some medium or crystal gazer was not coming to our apartment to demonstrate something to him or to try to sell him something. I don't think he ever bought anything except books or ever believed in anything. He frequently said that ninety-nine per cent of the mediums were fakes and that ninety-nine per cent of everything written about the supernatural was obviously nonsense. It was the one medium in a hundred who might not be a fake all the time, it was the one per cent of the supernatural that was true, which interested him. I believe he thinks that hidden behind all the false trimmings is a grain of important truth."

Graham nodded. "Most really intelligent people think the same thing," he said. "Most intelligent people are interested in knowing what this world is all about. You have stated my own beliefs exactly. Somewhere there is the truth about everything, about the sun, the stars, and the earth, and about the life on this earth. The purpose and the meaning of human life? That is the question. The answer to that question is hard to find. Your father sounds like a man I would enjoy knowing. Go on with the rest of your story."

THE GIRL brightened, "Thank you," she said. "The rest is soon told. About a month ago, my father apparently discovered a part of that grain of truth he has been seeking all his life. At any rate, he found *something*. A tremendous change



came over him."

"What kind of a change?"

"There were two changes. The first one was *eagerness*. He suddenly seemed to find a new zest in life. He was excited all the time."

"Like a child with a new toy?"

"Yes. But it was more than that. For the first time in years, he seemed to be suddenly very much alive. He was glad. He whistled and he sang. He teased me. Then—he changed."

"Yes," Graham encouraged.

"He became afraid, terribly afraid—" The girl groped for words.

"His new toy had turned into a monster?" Graham asked. Again he was aware of the shoe box sitting on his desk, of the shoe box and of its contents.

"Maybe," the girl answered.

"And what do you want me to do?"

"I want you to find out what has happened and to help him."

"I'll take the job, Graham said. 'I'll see him tonight.'"

Surprise showed on her face. "You mean you're going to talk to him? I thought a detective—"

"I'm not the kind of detective who hides in the dark," Graham answered. "I lay my cards on the table face up. I'm going show him this," He pointed toward the shoe box. "And I want you present while I talk to him."

"Me? Why me?"

"For the very good reason that you may have been lying to me," Graham answered promptly. "Or you may have been indulging in a little private fantasy of your own, for reasons of your own. I admit I *think* you're honest and sincere, but I don't know you well enough to be sure of my own conclusions. You may be the nut on the family tree instead of your father."

Anger colored her face. "Do you think *that* is fantasy?" she demanded, pointing to the shoe box.

"*That*," Graham said, "is the only

reason why I am going at all."

He rose to his feet. "I'll see you at eight o'clock."

She didn't like his attitude, she didn't like it a little bit. She was still angry when she left the office. She would have liked to tell him to go to the devil but her fear was stronger than her anger. He sighed, decided again that she was sincere. And he wished *again* that he didn't have to hurt people's feelings to get at the truth that was in them. He picked up the shoe box from his desk, carried it into his laboratory.

**A**N HOUR LATER he was indulging in some fantasy himself. He was apologizing to a person who wasn't present, to Mildred Chambers.

He had dissected the rabbit. Every muscle, every internal organ in the body of the little animal had been stiffened to the hardness of bone.

George Graham had an extensive knowledge of the various ways in which men—and animals—may die, guns, knives, poison, old age, disease. The rabbit had not died in any of these ways. It had not died in any way that Graham had heard of, or read of, or thought of.

"Whitman Chambers, where did you get this rabbit?" he thought. "And why did you hide it in your dresser? And what devil's broth have you been stirring up, Whitman Chambers?"

Graham was still indulging in fantasy. He had the uneasy feeling that this fantasy was turning into desperate reality.

**W**HITMAN CHAMBERS had gray hair and the most penetrating blue eyes George Graham had ever seen. He was a tall man with just the slightest suggestion of a stoop to his shoulders. There was a suggestion of sadness on his face.

"George Graham?" he said, extend-

ing his hand. "I have heard of you. Under other circumstances, I would have been glad to meet you."

"I'm sorry you're not glad to see me now," Graham answered. "I'm here to help you. I gather your daughter has told you I was coming?"

They were in a book-lined library. Mildred Chambers, wearing a sleeveless dinner dress, had answered his ring and had brought him to the library where Whitman Chambers waited.

"She told me you were coming," Chambers answered. "I can guess why."

The girl had seated herself in a soft chair. Chambers looked at her. "Would you like to leave me and Mr. Graham alone now?" he asked.

She shook her head. "Mr. Graham insisted that I be present when he talked to you."

"Um?" Chambers looked at Graham. The sleuth nodded.

"May I ask why?"

"Certainly. Your daughter gave me certain information today. I want her to say the same things in your presence that she said when you were absent."

"I see," Chambers answered. He looked angry.

"For her protection, for your protection, and for my protection," Graham added. "I am interested only in the truth."

"You think, perhaps, she lied to you?" Chambers challenged.

"Lying might be one word for it," Graham answered. "It might, however, be better to say that I am not a psychiatrist and I am not interested in the delusions of a deranged mind. She thinks you are in trouble and she hired me to help you. At the time she left my office, I was of the opinion that perhaps your trouble might merely be a delusion on her part. By requiring her to tell her

story in your presence, we would be able to tell whether or not it was a delusion. Thus, if she were hallucinating, you would be able to secure the services of psychiatrist rather than a private investigator who specializes in protecting the public from the activities of a certain group of rather unpleasant people."

Graham felt a little uncomfortable. His motives had been honest but they might be misinterpreted.

"You thought she might be crazy, and if so, I ought to know it," Chambers spoke.

"Something like that," Graham answered. He knew the girl's hot eyes were on him but he didn't look at her.

"You have since had occasion to change your mind?" Chambers continued.

"Yes."

"May I ask you what caused you to change your mind?"

"I dissected that damned rabbit," Graham answered.

There was complete silence in the book-lined room. The blue eyes of Whitman Chambers probed into Graham's face, measured him, weighed him. There was fear in the eyes now. Graham could see it lurking deep in the penetrating depths. He had the impression that the man who faced him was keeping his emotions under iron control.

Chambers turned to his daughter.

"So you found it?" he said.

"Yes," she whispered.

As though the strength had suddenly gone out of his legs, Whitman Chambers sat down. A pale film of sweat was visible on his forehead. He took a handkerchief from his coat pocket, dabbed at the sweat.

"Where did you get that rabbit?" the girl spoke.

WHITMAN CHAMBERS rose to his feet, walked across the room, and carefully closed the door of the library. He came back to his chair and he tottered as he walked. He looked at his daughter, then his eyes came back to Graham's face.

"I'm trying to help," Graham said. "I have to know the truth, and the whole truth."

"Man, I know your reputation," Chambers answered. "One look is all I need to see the honesty in you. I know you are trying to help and I know you need the truth. I am not questioning your motives or your need for facts."

"Then what are you questioning?" Graham asked.

"I am not questioning anything," the white-haired sportsman answered. "I am just trying to decide how important it is to me to stay alive."

"What?" Mildred Chambers' sudden whisper was loud in the silent room. "Dad!"

He didn't seem to hear her.

Graham watched in silence. The thousand feet of uneasy fear were crawling on his spine. Chambers' eyes were on his face, never leaving it.

"Dad!"

He still didn't hear her. He looked at Graham, seemed to find strength in the solid bulk of the man, courage in his even, fearless features. There was something about Graham that gave other people courage. Chambers seemed to draw courage from him now.

"I bought the rabbit," he said.

"Bought it?" his daughter questioned.

"Yes. I paid a hundred thousand dollars for it."

Graham gulped. One hundred thousand dollars! That was real

money in any man's language. And Whitman Chambers III had parted with one hundred thousand dollars to buy a dead rabbit!

"Extortion" Graham said.

Chambers nodded. "You can call it that if you want to. I paid the money willingly and I did not file a complaint with the police. Nor have I any intention of filing a complaint now."

"They got you, eh?"

"They've got me."

"Don't you know they will come back for more?" Paying off an extortionist is just an invitation to him to come back for more money."

"I knew that."

"Then why did you pay it?"

"That is a matter between me and my conscience," Whitman Chambers answered. "I do not at this moment choose to reveal why I made the payment."

"Will you tell me the person to whom you paid it?"

"I'll do better than that," Chambers answered. "I'll take you to the place where I paid it and to the people to whom I paid it. I'll let you see what I saw. Then you can judge for yourself whether or not I was justified in what I did. You can tell me whether or not you think the price was too high. Will you go with me?"

"Of course I'll go with you!" Graham answered.

Mildred Chambers rose from her chair. "I'm going too," she said.

"I would prefer you do not," her father said.

She hesitated. "Can you give me a reason?"

"Yes. It is better for you not to see—"

"What you have seen?"

"Well—"

Shaking her head, she walked over

to her father and kissed him. "That's not a good enough reason. I'm going with you."

"Very well," Whitman Chambers assented. "But perhaps—" He looked at Graham.

"I have no objections," George Graham answered. He pressed his left arm against his coat. Yes, the gun was there in its shoulder holster.

Graham's mind came back to a central thought: Whitman Chambers had parted with one hundred thousand dollars. Chambers was no fool. If he spent that much money, he must have been scared right down to the bottom of his soul. What had he gotten in return that was worth a hundred thousand dollars?

Or had Chambers quietly and easily gone batty? There was the rabbit, that triply damned rabbit. The rabbit was dead but it was never under any circumstances insane. It made Whitman Chambers sane too.

Graham swore silently. He had the feeling he wasn't going to like what Chambers was going to show him. He felt of his gun again, to make certain he still had it.

**THEY WENT** in Chambers' car to an address in Greenwich Village, to a neighborhood that had been taken over by people who were trying to be arty. The apartment was on the first floor of a building that looked like it had once been a garage but had been converted into living quarters. Chambers rang the door bell.

A tall, slender, dark-skinned man with the look of a hawk on his face answered the ring.

"Mr. Chambers. I'm glad to see you. You decided to attend another one of our weekly gathering, I see?"

Then he saw Graham. His face

changed.

"Hello, Swami," Graham said. "Or are you using the title of professor now, or perhaps doctor? I haven't seen you in a long time. Where have you been keeping yourself?"

"Hello, Graham," Featherstone answered. There was no pleasure in his voice.

Chambers looked doubtfully from one to the other. "You two seem to know each other," he said.

"Oh, the Swami and I are old friends," Graham said. "Of course, I didn't know I was coming to see him tonight."

"What are you doing here, Graham?" Featherstone said.

"I'm here in the interest of a client," Graham answered promptly. "Are you going to let us in or are we going to have to go out in the street and throw rocks at your windows until you decide to invite us in?"

Graham was assuming a lightness he did not feel. He knew Featherstone, knew him as a master of the art of separating a gullible sucker from a dollar. What was more important, Featherstone knew *him*. This was a development he had not anticipated.

It was too late to back out now. Featherstone had seen him with Chambers.

Featherstone made no move to get out of the doorway. He frowned at Graham.

"I might have known that sooner or later I would find you butting in on this," he said.

"Does my presence inconvenience you?" Graham asked.

"It isn't that."

"No? Then what is it?"

"It's this. You know some of the hocus-pocus I have used in the past."

"I believe I have heard of one or

two little tricks you have used in some of your operations."

"I'm not using any hocus-pocus now. This thing is real!"

For the first time Graham realized that Featherstone was scared, not of the detective, but of something else. *Was it possible that Featherstone was scared of his own hocus-pocus?* Had a faker run into something that wasn't a fake? Had a sleight-of-hand magician found that his magic was working without sleight-of-hand? Had a witch doctor found a death charm that worked?

Or was Featherstone lying, was he putting on an act? That the tall, skinny crook was a first class actor Graham did not doubt. Was he acting now?

"I don't quite understand you," Graham said. "If you have actually made an important discovery, you have nothing to fear from me. On the other hand, the price you are charging for dead rabbits seems a little high."

Featherstone turned his gaze on Chambers. The white-haired sportsman wilted under that hard stare.

"You've been doing a lot of blabbing," he said. "You've been working your mouth overtime. The money you donated was a willing contribution and you know it."

Chambers said nothing. All color had left his face.

Featherstone turned to Graham. "You can come in," he said. "And judge for yourself whether the price of dead rabbits is too high to pay."

He turned, led the way into a large studio apartment.

"You talk too much!" Mildred Chambers fiercely whispered to Graham. "You open that big mouth of yours and everything you know comes out of it. You shouldn't have mentioned that rabbit!"

"Why not?" Graham challenged. "I know this man. He's a faker and a crook."

"But supposing he is not faking, *this time?*"

"Then I have challenged him, and my neck is out a mile."

"And mine too, and daddy's!"

"Your neck was already out, baby, and so was your father's. All I have done has been to add mine to the list."

"But—"

"But the minute Featherstone saw us together, we were all on the spot!" Graham answered. "He knows me, he knows my reputation, he knows I'm here to show him up if I can. Because I was with you, he knows that either you or your father hired me to catch him. Baby, we're all in this together."

**N**OT COUNTING Featherstone, there were seven people in the apartment when they entered, four men and three women. There was also a little dog, a Boston bull, with a round face and a white spot over one eye.

"Sit down," said Featherstone. It was an order, not a request. He left without introducing them to any of the seven people present.

They sat down in chilly silence. The four men and the three women glanced at them but said nothing. Graham got the impression that these people were tensely awaiting something.

The little Boston Bull came and sniffed at his legs. He reached down and scratched it behind the ears. It snuggled up close to him, tried to sit on his feet. He noticed it was trembling. Chambers looked at the dog and his lips closed in a straight line as sharp as the edge of a knife.

The apartment had originally been

designed as an artist's studio. The room was huge, with a high ceiling. Broad windows as one had been designed to give light from the north. The windows had been painted black.

Directly under the windows was the strangest piece of furniture in the room, a black box about four feet square. Wooden blocks lifted it a foot above the floor.

Featherstone came back into the room. With him was a round-faced, scar-cheeked, hard-eyed little man who seemed to be his helper.

"Ladies and gentlemen," Featherstone said. "The demonstration I know you are all anxious to see is about to begin. But first I have an announcement to make, an announcement in which I know you will all be interested. We have with us tonight a man who has devoted a major portion of his life to exposing fakes and tricks of all kinds, a man who has boasted that he can duplicate every effect in every seance ever held—"

Graham twisted in his chair.

"George Graham, ladies and gentlemen, is with us tonight. If there is trickery in the demonstration you are about to watch, I am quite sure he will detect it."

Seven pairs of eyes turned toward Graham. He sat as immobile as a rock. The woman with the long cigarette holder looked almost hopefully at him. The thick-necked man in the blue suit gave him a slow stare. Mildred Chambers turned her head and glanced at him.

Featherstone smiled mockingly at him.

"Turn loose your devils, Swami," Graham said. "Let your spirit trumpets blow, let ectoplasm be unloosed."

At his feet, the little dog whimpered in fear.

FEATHERSTONE spoke to his assistant.

"Louie, will you catch the dog."

The scar-faced little man put on a pair of heavy gloves and approached the Boston bull. It cringed against Graham's feet and tried to jump into his lap. Graham did not know what was going to happen. He let Louie catch the little dog, firmly repulsing the impulse to kick the scar-faced man in the mouth when he bent over to pick up the frightened animal.

"Examine the dog closely," Featherstone urged. "Mark it in any way you see fit."

The animal was passed from person to person in the group. They looked at it with rigid fascination, seeming to see in it the horror normally reserved for a snake. Graham looked at it closely. It was just a little Boston bull, scared now, frightened by something it sensed was going to happen. Only one person in the group touched it. The thick-necked man in the blue suit took a pair of nail scissors from his coat pocket and carefully clipped a round spot of hair from the middle of its back.

"You are satisfied that you know this animal and recognize it?" Featherstone asked, when the examination was complete. All seven nodded.

"And you, sleuth, you can recognize it?" Featherstone said to Graham.

"I imagine I will know the dog again," Graham answered.

"Good. Louie, will you put the dog into the steel box." He nodded toward the square black box standing on the floor at the far end of the room.

The assistant lifted the lid, dropped the little animal into the

box, closed the lid again. He wasn't rough about it, nor was he particularly gentle. He just dropped the dog into the box as casually as a person might drop a cherished pet a couple of feet to the ground. Graham heard the soft thud as the dog hit the bottom of the box. He also heard its feet pound against the sides as it tried to leap out again.

There was a broad hasp with a heavy padlock on top of the box. Louie locked the lid into place, handed the key to Featherstone who placed it on a coffee table in plain sight of everyone.

Graham was uncomfortable. There was something here that he didn't like, that he didn't like a little bit. He tried to think what it was, and decided it was the casual, impromptu, matter-of-fact manner in which Featherstone and his assistant were acting. Graham had not the faintest idea of what was going to happen, but he had sat through hundreds of seances, he had seen table tipping, and spirit rapping, and had listened to fake mediums relay fake messages from the dead. A factor common to all these performances had been darkness. There had also been a consistently strong effort to secure a theatrical effect to impress the audience. The rooms had been draped in black cloth, the mediums had frequently worn turbans, they had covered themselves in black robes, in many instances the audiences had been required to hold hands, they might even have had to sing songs during the buildup.

The buildup had always been there, the bad theater had always been there, strong appeal to the emotions had always been there.

All this was missing here. Featherstone had not tried to impress his strictly limited audience. He had not resorted to any of the tricks of

the trade. He was wearing a plain brown business suit that looked like it had been made by an expensive tailor. His assistant was dressed in baggy serge.

**F**EATHERSTONE had not gone into an act. *He hadn't even turned off the lights!* He grinned sardonically at Graham; he paid the other members of his audience no attention at all. Yet they sat like statues, not moving, scarcely breathing. The woman with the long cigarette holder had nervously stuffed another cigarette into her holder. She was trying to light it and was so nervous she couldn't strike a match.

No one offered to help her.

Featherstone glanced around his audience.

"I can call devils from the vasty deep," he said, and paused.

The words were familiar. Graham could not quite place them but they sounded like something out of Shakespeare. The answer, as he recalled the words, was "Why, so can I, or so can any man. But will they come when you call them?"

"They will come," Featherstone stated.

No one spoke.

In the black box at the end of the room, the dog suddenly began to bark.

"I must ask you not to move under any circumstances until I give you permission," Featherstone continued.

The audience sat spellbound. Featherstone's assistant went to the front door and carefully locked it, then stood with his back against the wall.

"Now he'll turn out lights," Graham thought.

Featherstone left the lights burning. The big studio was almost as brightly illumined as it would have been if the noonday sun had been



shining into it.

Featherstone turned his back on his audience. He walked to the black box, stood in front of it, lifted his arms. He was looking up, up at the window that opened out on the night.

On the other side of that window was New York. The blaze of lights in the sky, the honk of taxicabs, the far-off rattle of the elevated, all the dim sounds of a great city. New York and the Twentieth Century.

His feet spread wide apart, Featherstone stood with his arms lifted in supplication. The black box in front of him seemed to be an altar and the window seemed to open out on something other than the New York night.

"Come!" Featherstone called. His voice had all the deep impressiveness of a ringing bell.

Something came through the closed window like an arrow from the bow, came out of the New York night, came through the window and into the room.

No pane of glass in the window was broken or otherwise disturbed, but something came through it, came with the darting speed and high-pitched drone of a gigantic bee, came darting into the room.

A thin, tinny scream came from the lips of the woman with the long cigarette holder. It was choked off. She stared wildly in the direction of the window, the pulse pounding feverishly in her throat. No one paid any attention to her. No one even noticed that she had screamed. She slumped forward to the floor in a faint and still no one noticed her.

A glacial wind raised ten thousand goose pimples on Graham's body. This—this was his secret fear. In every seance he had ever attended and every trick and fraud he had ever exposed, his secret fear had al-

ways been that sometime the seance would not be a trick, that sometime the creature from the shadow world would not be a fraud. The fear had been kept deep in his subconscious mind, unrealized, unknown, a secret canker that he did not know was haunting him. When the window pane blurred but did not break, when the vicious whine of that darting bee was suddenly loud in the silent room, his secret fear burst from his subconscious mind and nearly drove him mad.

**T**HE FEAR that hides in darkness, always out of sight, making itself known only by the vague feeling that something is looking over your shoulder, is a hideous trauma, a driving force scourging men to destruction.

Graham's right hand dived unbidden inside his coat, seized the butt of the pistol holstered there. Only the exercise of iron self-control kept him from leaping to his feet.

Sweat trickled down his neck inside his shirt and wilted his collar.

Featherstone stood with arms still uplifted. Little movements of his head revealed that he was trying to watch something in the air.

The vicious whine of a gigantic darting bee was in the air.

Featherstone was trying to follow the movement that had come through the window.

Graham tried to follow its movements too. It was in the room. He could hear it. He could almost see it. Every time he thought he had brought it into focus it darted somewhere else. He caught glimpses of little blurred distortions in the air, little glancing glimmering heat waves.

Now and then he saw tiny flashes of reflected light. They were always gone before he could focus his

eyes on them.

He tried to estimate its size. He could not see it clearly enough to tell how big it was. It seemed to vary in size. Now he thought it was as big as a baseball, now it seemed to be the size and shape of a plastic football.

It darted over Featherstone's head and came straight toward his audience.

Hands still uplifted, he turned his head and tried to watch it. On his lean, dark face was the expression of terrific mental strain.

It whined viciously six inches in front of Graham's nose. He couldn't see it. Pain went back along his optic nerve as his eyes tried to bring it into focus, pain as sharp as the shock of an electric current.

It was instantly gone.

It hung in the air before Mildred Chambers. She seemed to have stopped breathing. Her face was ghastly white. It moved on and stopped in front of her father.

Whitman Chambers closed his eyes. He looked like a dead man sleeping. Sweat ran down his face and dripped unheeded from the point of his chin. Then, it moved, and he opened his eyes again.

Graham had the impression he had closed his eyes to avoid the shock of electric pain that came from trying to focus on the thing. If that was true, then Whitman Chambers had seen it before and knew better than to try to look at it.

**I**T PASSED in front of the other members of the group. Some of them looked at it. Some of them closed their eyes. The woman in the red dress moved bloodless lips in prayer.

It hung in the air in front of the thick-necked man in the blue suit. He stared defiantly at it. He was not

easily intimidated, was this man. He had a kind of surly courage that was not easily put down. For a second, he tried to stare. Pain distorted his face. He winced, and closed his eyes.

"Come!" Featherstone said.

The whine darted toward him.

"Accept the sacrifice," he said.

The lid of the black box blurred. The whine of the bee was instantly subdued. It was still audible, but it was much weaker now.

Another sound was in the room.

The sudden howling of a frightened dog!

The little Boston bull in the box was howling in sudden fear.

The dog screamed its fear. The pounding of its body against the sides of the box as it tried to escape was loud in the room. It yelped and leaped and howled that unbearable horror had come to it. It begged to be released from horror, it tried to escape from its fear, it fought and kicked and screamed that death was better than this anguish.

And stopped pounding against the sides of the box, stopped howling, stopped screaming its horror, stopped asking for—death.

Death found it.

There was not a sound in the room. The woman who had fainted lay where she had fallen.

Featherstone, still standing with his legs wide apart, and his arms uplifted in supplication, spoke.

"You have accepted the sacrifice."

He waited.

"Then go!"

Something came out of the box, whirled once around the room, then went through the window and was gone into the night. A window pane blurred with sudden shifting lights but was undamaged as something went through it and out into the Twentieth Century New York night.

FEATHERSTONE picked up the key from the coffee table and handed it to Graham.

"Will you unlock and open the box?" he asked.

Graham took the key. Featherstone sat down and cupped his head in his hands. He looked desperately tired. His assistant hastened off into a back room.

Mildred Chambers knelt beside the woman who had fainted, began to rub her wrists.

The man in the blue suit stood up. "I'll help you," he said to Graham.

They unlocked the box. Featherstone took no interest in what they were doing. His assistant had returned with a bottle of brandy and Featherstone was pouring himself a drink of that.

The little dog was in the box. Its teeth were bared in a fighting snarl.

It was stiff in death, as stiff as the rabbit had been, bone stiff, stone stiff.

There is terror in unnatural death. There is horror in unnatural death. The fear of unnatural death is one of the fundamental human fears. Death from a known cause is bad; death from an unknown cause is infinitely worse.

Unnatural death had come to the dog in the box.

Graham turned it over. The man in the blue suit seemed to find a horrible fascination in the bare spot on its back.

Using nail scissors, he had snipped the hair from that spot.

"What do you make of it?" he said to Graham.

"I wish I were a life insurance salesman," Graham answered.

"What?" the man gasped.

"I bet I could sell a hell of a lot of life insurance right here in this room," Graham answered.

He turned from the box, walked over to Featherstone.

"What have you got, Swami?" he asked.

Featherstone took another drink of brandy. Graham picked up the bottle and took a drink for himself.

"What have you got, Swami?" he repeated.

"What do you think?" Featherstone answered.

"I'm not thinking right now."

"Um. Did you examine that box?"

"No."

"You should. It's made of steel."

"I'll take your word for that, for the time being. What was that thing?"

"I don't know," Featherstone answered.

"You don't know?"

"No. You can call it a devil, but you are only using a word without saying anything. You can call it an elemental, but again you are only using a word."

"It obeyed you," Graham interrupted.

Featherstone smiled up at him.

"Yes, I believe it did," he answered. "I believe it did."

He rose to his feet. "That's all," he said. "That's all for tonight. If any of you want to come back next Thursday night, I will be glad to see you."

He walked out of the room.

Graham let him go. Louie was urging the guests to the door.

"Mr. Featherstone is very tired," Louie was saying. "He can't talk to anyone and he can't answer questions."

Louie looking longingly toward the half empty bottle of brandy. He had the appearance of a man who could use a drink himself.

THE WOMAN who had fainted had been revived. Graham joined

Whitman Chambers and his daughter. They walked in silence to the car. When they were in the car, the girl spoke.

"Father, that thing that came into the room—"

"Yes, my dear—"

There was inexplicable fright on her face.

"A few nights ago—I don't remember exactly which night it was—that thing was—was in my bedroom. I awakened and heard it buzzing—"

"I know it was," Whitman Chambers answered.

"You knew it was there!" the startled girl gasped.

"Yes. Otherwise why would I have spent a hundred thousand dollars?"

"What? You spent that money to protect *me*?"

"Of course!" Witman Chambers answered. "I had attended two of Featherstone's seances. I had seen that thing come through the window and kill one time a cat in that box, the second time a rabbit. Suspecting trickery, I had asked for the body of the rabbit. I was going to have it examined by the best doctors that money could buy. But before I got that done, the thing was in my room at night. I heard it, I heard it disappear. It went to Featherstone. One hundred thousand dollars was the price he asked to control it. He hinted that it had been in your room, and said that a donation would be acceptable. I paid his price without question. I would pay it again without question, my dear—"

"But the police—" the girl protested. "Surely they could have offered some kind of protection."

Chambers sighed. "I have several times one hundred thousand dollars. I have only one daughter. Should I

take chances with the police when—when my daughter's life is at stake? No, my dear, this is not something for the police. Do you agree, Mr. Graham?"

"I agree," Graham growled. He could imagine how Chambers' story would have been received in the average police station. The best he could expect would be a gruff, "Brother, you're nuts!" from some desk sergeant. The worst he could expect would be an examination by a psychiatrist. Presuming Chambers was wealthy and influential enough to forestall an examination for mental disturbance—what odd words they used to describe insanity?—he could still get himself a reputation for being cracked, but he would not get protection, not from the police, not in a case like this.

THIS WAS something you fought yourself, this was a battle in which neither civilization nor law and order could help you. This was a case of individual survival, of one man and one woman, or of a few men and a few women, against the dark forces of the universe, against the night.

"What do you think, Mr. Graham?" the girl asked.

"I think it's extortion," Graham answered. "Extortion—and something else!"

"Do you really believe it is only extortion?" Whitman Chambers asked. He seemed a little relieved by that thought. If it was just extortion, just a method of prying money out of a wealthy man—

"And something else," Graham repeated. "I know the Swami. He has been a lot of things, and all of them have been crooked. This is crooked too, but the force he is using to extort money out of you is real. And he is scared of it himself. It obeys

him, but it also scares the living daylight out of him. That is the most damnable part of the whole case. Featherstone is scared. If he wasn't scared, then there might be some things we could do, but as long as he is scared, we have to walk mighty softly. Because the Swami, whatever else you can say about him, doesn't scare easily."

"What do you think that thing is?" Chambers asked. "The thing that came into the room."

"I haven't any idea whatsoever," Graham answered. "I am fairly familiar with the literature of the occult and there is nothing remotely like it in the maddest dope dreams of the craziest occultist who ever lived. That thing is unique."

He looked out of the car window. The advertising signs of New York glowed in the sky of night. Normally there was solid comfort in all that glittering electricity but there was no comfort in it now. Something else was in that sky, somewhere in that sky.

Graham had visions of a gigantic bee darting and dashing through the sky, twisting and turning in the night, buzzing as it moved. He visualized it leaping out toward the moon, maybe out toward the stars.

"What do you think we ought to do?" Mildred Chambers asked.

"How about taking a quick trip to Europe and forgetting to come back for a couple of years?" Graham suggested. "That ought to solve your problem for you. Featherstone will scarcely follow you to Europe."

There was silence.

"What about you?" Chambers asked.

"I'll stay here and see what can be done," Graham answered.

The silence fell again.

"We run while you stay and fight," the girl said.

"Well—"

"No, thanks," she answered. "We don't run off and let somebody else fight our battles for us."

"Good girl," her father said.

Graham was glad he had, already decided he liked this violet-eyed girl.

"Actually I don't see where you are in much danger now," he said. "You have already paid off. Featherstone should let you alone now."

Their silence told him that they knew as well as he did that he was lying. In dealing with an extortionist, the pay-off is no protection. There were two good reasons why all three of them were in danger. One, they knew too much. Two, Featherstone was scared.

**G**RAHAM left Mildred Chambers and her father at their apartment. He didn't even go up with them. They would want to talk and he had nothing to talk about, as yet. He wanted to think. He had the definite foreknowledge that his thoughts were not going to make him happy but he had to think them anyhow. He decided to walk back to his own modest bachelor apartment. It was almost midnight. Featherstone's seance—Graham used that word in the absence of a better word to describe what had taken place in Featherstone's studio—had not taken much time. The Swami had not attempted to put on a show. He had gone directly to the point and if the audience didn't like the shortness of the demonstration or the abrupt way they had been booted out when the performance was over, they could lump it.

Graham caught himself watching the sky as he walked down the almost deserted streets. The night was pleasantly cool for August in New York. The moon was over Manhattan. The old town looked quiet, peace-

ful, and serene. It was hard to realize there were places like Featherstone's studio in a town that looked so comfortable and placid.

"What in the name of heaven is that thing?" Graham thought. "It came through the window and the glass blurred but did not break. It went into that steel box and killed the dog—"

He was cold, cold, *cold*! It had killed the dog. Of course he hadn't examined the box. He only had Featherstone's word that it was made of steel. But Featherstone had invited him to examine it and he was willing to bet that if he had looked it over, he would have found it was actually made of steel. Of course, there might be a trick of some kind. An X-ray machine might be hidden in the room under the box, its radiations focused to pass through the floor and through the box, but he knew of no X-ray, nor any other kind of ray, that would turn a frightened dog into bone.

There wasn't any ray like that. Or if there was, it was the product of some obscure inventor who had never let his discovery become known.

There might be an inventor who had done exactly that. And Featherstone might have gotten control of his invention.

"Maybe I better pay a quiet visit to Featherstone's studio and see what I can find out," Graham thought. "I might discover something. I also might get my tail full of lead. I sure as hell don't know where else to start."

The absence of a starting point was giving him more trouble than anything else.

**H**E BOUGHT a paper, went into a restaurant for a cup of coffee and a ham sandwich. Graham was a confirmed believer in combining

reading and eating. When he reached the third page of the paper, he stopped eating.

A feature story on page three gave him a starting point. The story had originated in the town of Elm Point which Graham remembered as being a small town about two hundred miles from Manhattan. It had been written by some special correspondent and was dated the preceding day. The headline read:

### FARMER'S COW TURNS INTO BONE

*Elm Point, N. Y. Aug. 21 (Special) Sam Wakely, prominent farmer living near here, went out into his barn lot yesterday morning and discovered that one of his cows had mysteriously turned into bone over night. According to Wakely, he found the animal, a fine Jersey, standing stiff and cold in the corner of the barn lot when he went out to do his morning feeding. Although dead, the cow was still on her feet, but toppled over when Wakely pushed against her side.*

*James Watkins, Elm Point veterinarian summoned by Wakely, says that he has never encountered a similar case in his extensive experience as an animal doctor. He professes himself completely baffled as to the cause of the condition.*

A rabbit and a dog in New York. In Elm Point, two hundred miles away, a Jersey cow.

Graham found a telephone. After some argument with a sleepy central in Elm Point, he finally got Watkins out of bed.

"Most amazing thing I ever saw!" the veterinarian said. "Most amazing thing I ever saw. You with a New York paper, you say? Well, that cow was dead and I don't have the slightest idea what killed her. Fine Jersey,

too.

"Huh?

"City man, you say? Name of Featherstone? Let me think—"

Graham hung on to the wire while the sleepy veterinarian shuffled through his mind.

"I believe there is a man by the name living around here. Come to think of it, I believe his place joins Wakely's farm on the north. You looking for him to add something to your story, maybe?"

"Thank you," Graham said, and hung up.

Featherstone had a place in Elm Point. There was a dead cow in Elm Point.

**G**RAHAM headed directly for his apartment. He intended to dump some clothes into a suitcase, pick up his car at the garage, and take off for Elm Point. The elevator operator in his building recognized Graham. The operator was colored. He was also a little scared.

"Evenin', Mr. Graham. Been somethin' buzzin' around in this here lobby."

"What?" Graham said.

"Somethin' like a big bee. I heard it and I heard and I heard it, but I ain't never seen it a-tall. What's the matter, Mr. Graham? Ain't you all goin' up to your apartment after all?"

"I forgot something," Graham answered. "I got to go back and take care of it."

He went through the lobby and out of the building in one hell of a hurry.

He wondered what he would have found waiting for him if he had gone on up to his apartment.

If anything followed him, he did not see it.

**G**RAHAM saw Wakely's cow. It was the middle of the afternoon when he reached the farmer's place.

He had driven all night and had registered in a hotel in a town about twenty miles from Elm Point. For obvious reasons, he did not want to be seen around the latter place.

Wakely was a middle-aged farmer. He was a little scared but not too scared to have his business eye wide open. He charged Graham a dollar to see his cow.

Graham needed only a minute to determine that the cow, the dog, and the rabbit had died from the same cause.

"She was standin' right where she is now when I came out of the house in the morning," Wakely said. "All the other animals was herded together up in the corner of the lot. I thought maybe a wolf had scared them during the night. There's still a few wolves around here. It's mostly cut-over timber land from here to Canada and now and then a few wolves come down from up north. But it wasn't no wolf that killed her."

"I can see that," Graham answered.

"I called Doc Watkins and he come out and looked her over. He charged me two dollars, which was plumb wasted, for there wasn't anything he could do."

"You have any idea what killed your cow?" Graham asked.

"I haven't an idea in the world," the farmer answered.

"Well, thanks," Graham said. "Incidentally, doesn't a man by the name of Featherstone own the adjoining farm?"

"Yeh. City feller. From the next bend in the road you can see his house."

Graham caught a glimpse of Featherstone's house as he drove past. He didn't stop. He saw a gang of workmen busy cleaning up the debris left over after the construction of a large barn-like structure next to the garage. A new power line had been



strung from some distant source of electric current to this building. Heavy transformers on the last pole of the high line fed current into Featherstone's new construction.

Graham frowned. Featherstone was building something. It was out of character for the Swami to make extensive additions to his property, especially expensive additions. The price of high lines and big transformers was more than hay. What was Featherstone building?

It was a passing question. Graham had other and more important questions to think about. One question was why Wakely's Jersey cow had been killed. Extortion could not be involved. The farmer didn't have enough money to interest Featherstone. Probably even the threat of death would not jar him loose from his hard-earned dollars. Farmers were likely to be independent as the devil. No, the Swami was not trying to extort money from Wakely. Then why had the cow been killed?

One possibility was that the farmer knew too much and was being warned to keep his mouth shut.

"That doesn't make sense either," Graham grumbled.

**O**BVIOUSLY Wakely *hadn't* kept his mouth shut. He had called a veterinarian, had talked to the newspapers. If the death of his Jersey had been intended as a warning, Wakely would have known enough not to talk about what had happened.

No matter how he looked at it, the death of the cow had all the appearance of an accident.

"I wonder if Featherstone knows that cow is dead!" he thought.

The thought scared him. He was scaring easily these days and this thought scared him again. Didn't Featherstone have full control of the thing that had come through the win-

dow and killed the dog in the steel box? Had it slipped away from him and gone on a killing spree of its own, its victim being Wakely's cow?

Graham clearly remembered the fear that Featherstone had shown during his seance, the suggestion of strain visible on his lean face as he called his devil not from the vasty deep but from the infinitely more vast sky. Was that fear rising from the knowledge that he could not guarantee control of the monstrosity he could evoke?

"I wish I lived on an island in the South Seas!" Graham thought. "I wish I was a beachcomber and had nothing bigger to worry about than when the next coconut would fall from a tree."

He drove back to the town where he was staying but he didn't go near the hotel where he was registered. Maybe he was shying from shadows but he intensely disliked visiting the same place twice. Something might be waiting for him if he went back the second time.

For a hard-boiled detective, who had spent most of his life exposing fakes, who believed nothing that he read and little that he saw, Graham was developing a set of nerves.

He went to a clothing store and bought a pair of overalls, a pair of tennis shoes, and a dark cap. He went to a hardware store and bought a light crowbar and half a dozen plain corks, which he placed in his car. He bought a paper to read while he was eating dinner.

It was on the first page.

**NOTED FINANCIER DEAD**  
*Whitman Chambers III Victim*  
*of Mysterious Attack*  
**DAUGHTER MISSING**

Graham didn't eat any dinner. By midnight that night, wearing the

rough clothes and the tennis shoes he had bought, his face and hands darkened with black cork, he was in the little valley below Featherstone's four level house.

A NIGHT wind came slowly up the little valley. It rustled the leaves of the trees with an infinity of scratchy sounds. It was a cool wind, too cool for August, and it seemed to be moving in from outer space and trying to hug the earth for warmth. Overhead the stars glimmered in the night, pale dots of light in comparison to the brightly shining moon.

Graham did not know whether or not he liked that moon. The moonlight helped him to see where he was going. On the other hand, it might make it easier for him to be seen. His dark clothes would reflect no light and the cork on his face and hands ought to make his skin invisible but he had the unhappy feeling that there *might* be something here in this place that could see in darkness.

A light was visible on the third level of Featherstone's hideout. The new building that had been constructed beside the garage was dark. There were no windows in this building and only one door. The door was sheathed in sheet steel, Graham discovered, as he came cautiously around the building. He didn't try to open the door. He listened. Hair raised along the back of his neck.

The building sounded like a beehive.

Through the steel door, he could hear a muted humming, a buzzing, like the buzzing of a swarm of bees. Notes rising suddenly sharp and shrill were like the quick darting of individual bees testing their wings in flight. In the background was the steady hum of the swarm.

The sound of big bees!

Hackles of tiny hair raised all over Graham's body as he listened to that sound. The oldest fear of the race, the fear of unnatural death, pounded with his bloodstream through his body. Natural death was bad enough but through familiarity the mind had learned to accept natural death as an inevitable fact but unnatural death the mind of no man had yet learned how to accept.

Bees that were not bees, big bees, bees that moved too fast for the eyes to follow, bees that came through a closed window, blurring the glass, bees that went through a steel box, blurring the sides but leaving no mark of their passing.

Had Whitman Chambers heard the sound of a bee before he died? Or had the bee come too quickly for him to hear it?

Would George Graham hear the sound of a bee before he died? Would the rapid darting of an angry bee roar in his ears just before his body froze?

The door of the building scraped as it started to open.

Graham slid back into the shadows.

Featherstone came out of the door. Louie, his assistant, followed him. Louie closed but did not lock the door.

"One more load and we'll have everything moved in here," Featherstone said. "Between you and me, Louie, I'll be damned glad when we get this job done."

"You and me both," Louie fervently answered. He looked furtively around and his voice dropped to a whisper. "Do you think we can get away from here tomorrow?"

"Don't ever say that!" Featherstone hissed. "Don't even *think* it!"

Featherstone glanced quickly over his shoulder at the closed door. In the moonlight his face looked haggard and old.

Except for the heavy hum of the power transformer on the pole at the end of the building, there was no sound. Featherstone cocked his head and listened. The night wind went softly past, rustling the leaves of the trees.

"Come on," Featherstone said, his voice unnecessarily loud as if he spoke for the benefit of unseen listeners. "We still have work to do to-night."

**G**RAHAM stared in dumfounded amazement after them as they stalked up the hill toward the lighted room. His amazement abruptly grew to startled incredulity when he saw the girl step out of the shadow of a tree and say:

"Hands up!"

He knew that girl, would know her anywhere he heard her speak. Mildred Chambers! Missing in New York, present here, present with a gun in her hand! Present, and talking like a highwayman, briskly saying, "Hands up!" over the threat of a gun. He admired her courage. It was a splendid thing, much better than her judgment.

Both men quickly lifted their arms. Then Featherstone recognized the girl behind the gun.

"Miss Chambers!" he said.

"That's right," the girl answered.

"What are you doing here?" he asked.

"I came after you," she answered.

"After me?" There was astonishment in his voice. "May I ask why?"

"As if you didn't know!" Hot bitterness surged in Mildred Chambers' voice. She came closer to him, the gun held very steady. "You—you murderer!"

"What?" Featherstone gasped.

"Walk up that path," the girl ordered. "Keep your hands in the air, both of you."

She startled to slip past them on the sloping hillside. Her purpose was to get behind them and force them to walk up the path ahead of her.

Her foot slipped on the steep slope. As she tried to catch herself, the gun momentarily pointed down. Featherstone reached out a long arm and snatched it from her grasp. Louie grabbed her. She squealed, tried to scream. Louie's hand clamped over her mouth.

Skirts flying in the air as she tried to kick herself free, the two men carried her through the lighted door.

Graham had already made up his mind. She had asked for trouble when she came here. A little rough handling would hurt nothing but her dignity. Before he went up and rescued her, he wanted a peek behind that steel-sheathed door.

He opened the door the tiniest crack. The sound of darting bees was loud in his ears.

A spray of light was flooding up from a dark receptacle in the far corner of the building. The light was an intense violet color, so violet that it hurt the eyes. The bees were playing in the spray of light.

There were four or five of them. Moving faster than the eye could follow, Graham could not count them. He could see glimmerings of flashing light darting into and through the spray of up-flung violet illumination.

Feeding, playing, bathing? He could not tell. The things were doing something, he did not know what. Featherstone's devils. Like the devil that had come through the window of the Swami's New York studio, that had come out of the night. Graham seemed to hear again the howling of a frightened little dog. Five devils. Playing in violet light. Graham's eyes began to hurt as he stared at them, tried to follow their darting motion.

**F**LASHING in and out of the violet glow, they were as beautiful as humming birds playing in a sunbeam. He would have been entranced by the sight, if—if a frightened dog had not kept howling somewhere in the back of his mind.

The building in which they were playing was a single room. Wooden posts supported the roof. Workbenches were built along two sides. The whole structure had the appearance of hasty improvisation. It was crammed almost to the roof with electrical equipment.

Part of the equipment appeared to have been put into place and the building erected around it. Looking at the building and especially at the electrical equipment in it, Graham could easily guess where a good part of Whitman Chambers' hundred thousand dollars had gone.

Graham looked only an instant, then softly closed the door. He had the feeling that he had risked his life a dozen times over in opening the door for only a second.

He slipped silently up the path to the lighted window. Mildred Chambers was sitting in a chair. Featherstone was standing in front of her.

"You called me a murderer," Featherstone was saying. "What did you mean by that?"

"You killed my father," the girl answered. Graham wondered if she had gone hopelessly crazy. People who had good sense didn't call murder by its right name when they were in the presence of the murderer and in his power.

Featherstone looked blank. "Are you mad? I killed your father! That is ridiculous nonsense. I haven't seen your father since he left my last seance and he was in good health when he left my studio."

"You killed him just the same," the girl insisted. "The same way you

killed the dog."

"What?" Featherstone's blank look deepened.

"You did it. I found him myself. Oh, I know you probably can't be legally convicted of the crime, but you're guilty just the same."

Featherstone stared at her. "Now, now, child," he said soothingly. "I know you are all mixed up and confused and frightened. You are imagining things, aren't you? Come now, tell the truth. You made up this fantastic story, didn't you? You can tell the truth. No one is going to hurt you."

Mildred Chambers stared at him in utter bewilderment. "You—you talk as if you don't know what happened!"

"I'm sure nothing happened, child. I'm sure this is only your imagination."

"Don't—don't you ever read the papers?" she asked.

Surprise showed on his lean face. He looked quickly at his assistant. "Louie—"

"They're over there on the table," Louie answered. "I brought them from the mail box this afternoon but you were too busy to look at them."

Featherstone snatched the still unrolled newspaper from the table. His fingers shook as he tore it open. He glanced at the front page.

As he read the news story, Featherstone began to look more and more like an old man. The fire of life, the zest for living, went out of him like air cut out of a punctured toy balloon.

Graham saw how preoccupied Featherstone was with the story in the paper. He opened the door and stepped quietly into the room.

"Is it that bad, Swami?" he asked.

**M**ILDRED Chambers took one look at him and screamed. To her, he looked like a ghoul coming

unobtrusively out of the darkness.

He had forgotten the burnt cork caubed on his face and hands.

"Take it easy, baby," he said.

She recognized his voice and flew to him. His eyes on Featherstone and Louie, he drew his gun.

"Don't either of you get any ideas," he said.

Louie, his eyes on the gun, halted the sudden flash of his hand toward his coat pocket.

Featherstone glanced up from the paper, blinked at Graham, then continued reading.

Graham stared at him. "His most dangerous enemy comes into the room with a gun in his hand and he doesn't even notice!" he whispered

"What?" Mildred Chambers said.

"I come in here and pull a gun and Featherstone doesn't even pay any attention to me!" he said.

"Do you feel slighted?"

"Do you know any prayers?"

She stared at him like she was trying to see through the cork and make certain it was actually Graham underneath.

"You better be saying them, if you know any to say." Graham answered. He watched Featherstone, never for an instant taking his eyes off the man. Out of the corner of his eyes, he watched Louie.

Still unaware of Graham, Featherstone finished reading about Whitman Chambers and the way Whitman Chamber had died. Casually, without seeming to notice what he was doing, he laid the paper on the table. His mind was full of another thought. He looked again at Graham and did not see him. He started toward the door, turned and took three steps in the opposite direction, turned again.

He was pacing the floor.

Suddenly he spoke.

"Graham, how did you know I was here?"

"Um. That's not a hard question. There was a story in the papers about a cow that had turned to bone—"

"What?"

"She turned to bone just like the little Boston bull in your steel box. I thought you might be somewhere near the place where that happened—"

Featherstone had stopped listening. He was pacing the floor again.

"Graham, are you telling the truth?"

"I saw that same story," Mildred Chambers whispered. "That was how I traced him too."

Graham said nothing.

Featherstone abruptly sat down. He looked at Mildred Chambers.

"You may believe me or not, as you choose, but until you told me, I knew nothing of the death of your father."

Graham took a deep breath. He slipped the pistol back into his pocket. "That's what I was afraid of," he said.

"You may well be afraid," Featherstone answered.

"You can't control your devils," Graham said.

"I can't control them," Featherstone admitted.

"I AM an extortionist," Featherstone said. "I am a faker, I am a charlatan, I am a crook. But I am not a murderer, no!"

"I believe you gave Whitman Chambers the impression that unless he paid off, his daughter—"

"Gave him the impression, yes," Featherstone interrupted. "I have admitted extortion. But if Chambers had laughed at me, I would have sought out some other wealthy person to scare money out of. That was the purpose of my weekly seances. I had no intention of carrying my threats."

He shook his head. "Terror, not murder, is my business. No one ever

succeeds in washing the stain of blood off his hands. I did not kill Whitman Chambers."

"You admit that the—for lack of a better word I must say the devil over which you have—or had—at least partial control could have been used to kill him," Graham said.

"Lord, yes!" Featherstone shivered. "I admit that I could—and possibly still can—use it to kill anyone anywhere. But, except for animals, I did not use it for that purpose."

"You did not send one of them to kill Wakely's cow?" Graham questioned.

"I did not," Featherstone answered promptly. He turned his black eyes on Graham. "How did you know there was more than one of them?"

"I looked inside the building at the foot of the hill," Graham answered.

"You did!"

"Yes."

"*And you're still alive!*" The words were spoken in a wondering whisper.

Featherstone looked at Graham, then looked away. His forehead creased in thought.

"I don't understand *that*," he said.

"You mean you don't understand why I'm still alive?" Graham questioned.

"That's right. Surely the *draal* was aware of you, even before you opened the door—"

He came over to Graham, looked wonderingly at him, reached out a hand and touched the private investigator. When he spoke, he seemed to be talking to himself.

"Was the *draal* asleep? No, that's not possible. I don't think it ever sleeps. Then why didn't it know you were outside the building and why didn't it kill you?"

"Eh?" Graham said. The thousand feet of naked fear walked over his skin.

"You should never have been able

to approach within a hundred yards of that building. You should never under any circumstances have been able to open that door."

Featherstone spoke like a man in a trance.

"You opened that door and you're alive," he continued. "I wonder—I wonder if the *draal* knew you were there, but did not want to kill you until you were somewhere else? I wonder why you're still alive? Tell me, did something follow you away from the building, did something follow you up here?"

"Something like what?"

"Something that sang like a big bee when it moved."

Graham shuddered. "Not that I was aware of," he answered.

"Then I don't begin to understand it," Featherstone said.

"Why don't you let someone help you understand?" Graham suggested.

Featherstone's black eyes centered on him. Graham wondered when this enigmatical crook, this self-confessed extortionist and faker, was going to talk. Featherstone had admitted extortion but extortion was only a small part of a much bigger story. When was Featherstone going to reveal the whole story?

When was he going to tell what those five glinting creatures playing in the spray of violet light were?

THE STORY belonged to Featherstone. He could reveal it or keep it to himself, as he chose. Neither force nor threats would move him.

Graham was desperately eager to know the whole story. The fact that his life might depend on his knowledge was not the only reason he wanted to know. All his life he had been trying to lift the veil from the face of truth, to glimpse if only for a moment something to the dark reality of the universe. Featherstone had

discovered something. Graham wanted to know what it was.

"What for instance, is the *draal*?" he questioned.

He kept the tone of his voice calm, he kept his words matter of fact. He was trying to nudge Featherstone into talking.

Featherstone was in mental turmoil and Graham knew it. Every action of the man indicated an intense mental conflict going on within his mind. He looked like a man in a trance. He had shuddered away from the suggestion of murder, yet he must know that he was at least partly responsible for the death of Whitman Chambers. This was one cause of the conflict in his mind. He had admitted extortion, he had admitted he was a crook, a faker. A man who will make such admissions is trying to make up his mind to admit even more. Graham was trying to help him make up his mind.

There was silence. Louie had sat down and was nervously smoking a cigarette. Mildred Chambers watched, her face tense with unexpressed fear. Far off in the night a car honked. Off there somewhere in the darkness somebody was driving a car along a road, somebody who had never heard of a *draal*, who had never seen five weird incredible devils playing in a spray of violet light.

"I'm trying to help you," Graham gently said. "I think you have discovered something that turned out to be bigger than you thought. I'm trying to help you get out of the hole you're in."

There had been hostility in Featherstone's eyes. A little of the hostility went away when Graham spoke. But the grim central core of his thinking did not change.

"I believe you," Featherstone said. "Odd as it, I believe you would actually help me if you could."

"I can try," Graham said. "I think I told you once before that you had nothing to fear from me, if you had made me an honest discovery and were using it for honest purposes."

"I wasn't using it for honest purposes."

"When you are willing to admit that, I am willing to help you. What is a *draal*? I would like to know."

"The *draal*?" Featherstone paused. Graham had the impression that the man was listening before he answered. His face was tense, his eyes alert.

The night wind went over the roof of the house, softly sighing. Featherstone looked up, listened to the wind, made certain it was *only* the wind, before he answered.

When he spoke his voice was the lowest possible whisper.

"The *draal* is a brain!"

He looked quickly around the room as if he was afraid someone was listening.

"A brain?" Graham spoke.

"Yes. Speak in a whisper, will you? It probably doesn't make any difference but I feel a little safer when we speak softly."

THE WIND, blowing through an open window, tugged at a curtain. Featherstone's gaze concentrated with terrible intensity on that moving piece of cloth.

"It's only the wind," he muttered at last.

"You were telling me about the *draal*?" Graham whispered.

"Yes. So I was. So I was. The *draal* is a brain—" He paused, groped for words. "When I say the *draal* is a brain, I don't mean that it is like a human brain. It isn't. The only parallel between the *draal* and the human brain is that both of them are organs capable of rational thought. The parallel ends there. There is no comparison between the quality of the think-



ing of the two organs. So far as I have been able to determine, the thinking power of the *draal* begins at about the highest level of which the human mind is capable."

Again he looked around the room, seeking some invisible listener whose presence he suspected but could not detect.

"Where did this brain come from?" Graham questioned.

"It was found in a ditch," Featherstone answered.

"A—!" Graham abruptly shut up. He looked closely at Featherstone, seeking the tell-tale marks that would reveal a wandering mind. A brain found in a ditch! It seemed incredible.

"It was in a plastic ball that was incased in lead," Featherstone continued. "How long it had been in that ditch, I do not know, but it must have been there for thousands of years. It was covered with compacted glacial detritus that must have been deposited during the last ice age."

He began pacing the floor again as he sought the answer to some perplexing problem.

"I have thought and thought about the origin of the *draal*," he continued, still speaking in a whisper and still keeping a wary eye on the blowing of the curtain at the window. "And I have not reached a conclusion. If it originated on earth, then there must have been other pre-human races of tremendous intelligence on this planet. I think a far more likely solution for its origin is that it came from somewhere in space, and reaching earth just as the last ice age was ending, was somehow caught and buried in a flood of water flowing from a glacier."

Graham was silent. Was Featherstone telling the truth or was he putting on a superb act, building fantasy

on fantasy, erecting a towering dream structure of other worlds and other universes? Graham was not certain, but more and more he was beginning to suspect that the faker was telling the truth. Certainly Featherstone's words were opening long avenues into space and time, were revealing tantalizing glimpses of the secrets that went into the making of the worlds.

"Another problem I have not been able to solve," Featherstone spoke again, "is whether the *draal* is itself an independent brain or whether it is only the relay station of some other greater brain that is located somewhere else."

"Ah," Graham said.

**F**EATHERSTONE'S piercing eyes were on him. "You think you have a brain," he said. "And you think your thoughts originate in your brain. Did it ever occur to you that your thoughts might not be your own, that your brain might be only a relay station receiving impulses from some infinitely greater, mightier, stronger, brain located perhaps even outside space and time as we have come to know them?"

Graham stared at this enigmatical man. "And I thought you were just a crook!" he whispered.

"I am a crook," Featherstone answered. "But not just a crook."

"I'll say you're not! Did you know that when you talked about the human mind being only a relay station operated by some greater mind you were coming very close to some of the most advanced scientific thinking of this century?"

"Of course I know it," Featherstone answered.

"I think," Graham said slowly. "I think perhaps I am beginning to trust you."

"You have to trust me," Feather-

stone answered. "And so does this girl. And so does Louie. And so does the whole damned human race tonight."

"What?"

"Haven't you yet realized what those things down in that building mean?" Featherstone asked.

"I'm beginning to realize it," Graham answered grimly. "I didn't realize it at first, because I thought you could control them."

"I'm not at all certain of my control. At first, when there was only one of them, I was sure of my control. That was what led me astray. I was tricked and didn't know it."

"I guessed something like that. And I didn't know whether to shoot you or help you."

"The time when shooting me would do any good is passed," Featherstone said. "If you had shot me two months ago, it might have done some good. I say *might*. Probably, if I had been taken out of the picture, the *draal* would merely have fastened on someone else and the result would have been the same whether I was living or dead. No, Graham, this is no time to shoot me. I'm the one man on earth who has to stay alive until—"

He paused. "—Until it is determined whether or not the human race is to remain the dominant species on this planet."

Mildred Chambers had been following this conversation in silence. Changing emotions showed on her face as she listened now to Graham and now to Featherstone. Doubt, disbelief, uncertainty, had all from time to time showed on her face. Disbelief showed there now.

"That sounds silly," she spoke. "Those devils may be dangerous, they may be deadly, but there are only a few of them, only as many as I have fingers on one hand. There are hundreds of millions of men. How can

four or five creatures, even with tremendous powers, overcome the millions of humans?"

Featherstone looked at her. "I wonder what dinosaurs thought when a little animal something like a shrew squeaked at them around the edges of their marshes, hopping frantically away from their thundering feet? If the dinosaurs had been capable of thinking, I wonder if they would have thought silly the idea that the far-removed descendants of this little shrew might sometime supplant them? There were millions of them. Any one of them could have crushed the squeaky little shrew without knowing it. Yet the dinosaurs are gone and the descendants of the shrews rule this planet today."

He shrugged. "Evolution and survival are the only different words for battle. You are either stronger, smarter, swifter, than something else, or you die. That is one of the fundamental laws of the universe. And you cannot evade the fight. The human race has fought the battle of evolution since this planet cooled enough for life to appear on it. The race has always won. If it hadn't won, it wouldn't be here. Tonight, and tomorrow night, and all the other nights that are to be until the issue is decided, the human race must fight again. Either we survive or the *draal* survives. In this battle there is no compromise."

**HE PAUSED.** "Only tonight, when I learned what had happened to your father and what had happened to a farmer's cow, did I finally realize that what I had thought was merely a method of becoming wealthy was in reality the bugle call to battle. And I also realized—to my eternal pain—that the bugle call had found me playing the part of traitor to my own kind."

For the first time he forgot to whisper. The words rang clear and compelling in the silent room.

"I hope," Featherstone continued. "I fervently hope that the historians of the future—if there are any—will write that only through ignorance of the true nature of the enemy did I play the part of a traitor. I know, however, that ignorance is no excuse. In the battle of evolution, in the battle to determine which species survives and which dies, only results count. You either survive or die and ignorance is not an excuse for dying but a reason for it. I know this. I hope, however, that the historians will write that the ignorant traitor was at least sorry."

Graham felt the struggle going on in the man's soul. Featherstone had been false to the oldest loyalty of the race, the loyalty to one's own kind. He was paying part of the price in bitterness. Graham wondered how he would pay the whole price. For always the whole price is exacted for disloyalty. And the price is never merely a single pound of flesh.

"The *draal* tricked me," Featherstone continued. "I thought I could use it. All the time it was using me. It taught me how to create the *dreth*, how to blend and mold and feed the forces that go into that hideous little monstrosity—"

"*Dreth*?" Graham questioned.

"I forgot you didn't know. The thing that killed the dog, that was a *dreth*. The things you saw down in the building below us, those were *dreths*. If you ask me what they are I can only tell you that they are fields of electro-magnetic force. As to the powers they possess, I can only say I don't know, but I suspect their ability to kill by turning flesh into bone is merely a demonstration of a minor ability. They go through glass as if it didn't exist, they can go

through steel, through copper, through any metal that is not several inches thick. Thickness stops them. They can't go through a brick or a stone wall. Too thick. But they can go through the wall of a frame house or a wooden box without even slowing down. They move at a speed of hundreds—possibly thousands—of miles per hour. They may be alive. I don't know about that. They are under the control of the *draal*, which sends them out and calls them back at will. Although they do not possess sight as we know sight, they are most certainly aware of everything around them. They are the things I was using in New York to scare money out of millionaires."

"You said the *draal* controls them," Graham pointed out. "Yet in your studio in New York, you seemed to control one of them."

"Wrong. My control was not direct. It was through the *draal*. In other words, I told the *draal* what I wanted done—choosing always something that the *dreth* could do—and the *draal* sent the *dreth* to do the job. At no time did I have direct control over the *dreth*."

"How did you tell the *draal* what you wanted done?"

"Telepathy," Featherstone answered.

"Telepathy?" Graham echoed.

"Certainly. Direct contact between minds. Oh, don't misunderstand me. I have no telepathic powers. It wasn't my mind, nor the power of my mind, that made the trick work. The *draal* has the telepathic powers, not me. It reached my mind, learned what I wanted, sent the *dreth* to do the job. The *draal*, in other words, can reach and read my mind. For the love of heaven, Graham, why do you think I've been talking in a whisper, why do you think I've been jumping every time the wind blows that curtain, why

do you think I'm so blasted scared? Because the *draal* can read my mind!

"All the time I've been talking to you, Graham, I've been afraid the *draal* was reading my mind. I'm scared to death that it knows what I have been saying and what I have been thinking. If it has been reading my mind—if it knows that I realize how dangerous it is and what a horrible menace it is not only to us but to the whole human race—then at any second a *dreth* may whistle through the walls of this room and kill all of us!"

The wind tugged at the curtain as Featherstone stopped speaking. Every sense tense with expectancy, he stared at the moving cloth. There was silence in the room, the sort of silence that comes from dreadful expectancy.

“WHEN I first found the *draal*, my own greed obscured my vision,” Featherstone said. “I was so intrigued with how I could turn the discovery to my own advantage—how I could use the *draal* to make myself rich—that I did not realize it was using me. When it told me how to make a *dreth*, I was delighted. I could use the *dreth* to clean up. Only when the second *dreth* appeared out of the same crucible of force in which the first one was created, did I begin to become suspicious. One *dreth* was all right. I could use one of them. Two of them, however, I did not need. Then there were three, then four, then five of them. My suspicions grew stronger. When I learned of the death of Mr. Chambers, my suspicions became certainties. The *draal* was using me.”

His whispering voice faded into silence and Graham got a glimpse of the grim drama that had been played here in this hillside house. Featherstone had tried to use the *draal*. And had

been used instead!

“The *draal* itself is almost helpless,” Featherstone continued. “It can barely move. Possibly, at one time, it possessed full, free-ranging, unlimited motive powers, but in the centuries during which it was buried in the ground, it lost almost all of its ability to move. Having no hands, it cannot use tools. A man without legs or arms would be in much the same position as the *draal*. Such a man could not move, nor could he use tools to make himself a pair of artificial legs, or a gun to defend himself. He might have the most brilliant and powerful mind of any individual in the human race but the only way he could use his mind would be to tell someone else what to do and how to do it.”

He paused. Off in the night a whip-poor-will was calling.

“The *draal* used me as its legs and arms,” he continued. “It used me as its tool. I brought to it the equipment it needed. And it flattered me, oh so subtly it flattered me! It told me what a smart person I was, how intelligent I was, and how the *dreth* would aid me. I never did realize that its real purpose was to get a *dreth* created, that once a *dreth* was created the *draal* was probably the most powerful entity on this planet!”

He looked at Graham. “Now you understand why I said I have played the part of a traitor to my own kind. I have brought into existence a monster the like of which the human race has never seen. Because of me the bugle call of battle is blowing tonight all over the world. Graham—” Clenched fist smacked into open palm in a sound as loud in that stillness as a pistol shot—“Graham, we either destroy the *draal*, or destroy the *dreth* and thus take away all powers from it, or there is in motion a force that will either conquer or destroy the human race. It's either or else, Graham. Either or else.”

"What do you propose to do?" Graham said slowly. "How are you going to destroy the *draal*, how are you going to render it powerless?"

"That's what I don't know," Featherstone answered. "Oh, I know how to destroy it, or think I know how. Actually the plastic ball in which it is encased seems fragile. A single quick blow from a hammer ought to smash it. The question is, how to hit that single blow and stay alive! If you try to strike it, it will read your mind, and you will be dead before you can pick up a hammer."

**H**E BEGAN to pace the floor again. As he walked, he talked to himself.

"It's got to be done right away. Tonight. There are five of the *dreth* now. Tomorrow there may be ten. Every new *dreth* is a new weapon. So it's got to be done now. And I'm the man who has got to do it."

Featherstone shuddered away from that decision. He didn't want to decide that he was the man who had to destroy the *draal*. He didn't want to take that chance. He wanted to stay alive as much as any man. The loyalty to his kind, the loyalty to his own people, was driving him. He took a deep breath, stopped pacing.

"I'll go do it," he said.

"And I'll go with you," Graham said.

Featherstone stared at him in blank astonishment. "You will not!" he said.

"This is my fight too," Graham argued. "You may need help, and need it badly."

"I'm not thinking about that," Featherstone answered. "You are a stranger to the *draal*. The instant you step inside that building it will begin probing into your mind. It will sense your intentions in a second. No, Graham, you're not going with me."

The ghost of a smile showed on the lean face. "Though I thank you for your good intentions."

"What about it reading your mind?" Graham retorted.

"It knows me. It has accepted me. Unless I do something to arouse its suspicions, it will pay no attention to me. Louie, where are you going?"

The little scar-faced man had started to sneak from the room.

"I—I was just—just going to step aside for a breath of fresh air," He answered. His face was gray with sudden fear.

"You were going to take a run-out powder on me," Featherstone accused. "But you're not going to get away with it. You are going to help me carry the last load of stuff down to that building."

"No!" Louie whispered. "Not down there. Not when you're going to try—"

"You've been helping all evening," Featherstone answered. "You've been in and out of that building a dozen times tonight. The *draal* knows you. You will be safe enough."

"Supposing I fail?" Featherstone grunted. "Come on, Louie. I won't fail. Get hold of the other end of this box. No Louie, there is no use in trying to argue. You have been with me all evening. If you don't make this trip with me, your absence might arouse the suspicions of the *draal*."

Each carrying one end of a heavy packing box, they went out the door and into the darkness. Beads of sudden sweat were visible on the face of the little man, but Featherstone, on the contrary, showed no sign of fear. His face calm and composed, was lighted by an inner glow.

Graham watched them walk through the door. He took a deep breath. "There goes destiny," he said.

**M**ILDRED Chambers stayed very close to Graham, as close as she

could get. "I'm scared to death," she whispered. "I've never been so frightened in all my life."

Graham could feel her trembling. "So am I," he answered. "And Baby, we've got reason to be."

"Do—do you believe that story he told?"

"Do I believe it?" Graham gasped. "Good lord! Do you think Featherstone was lying?"

"No.—It isn't that. I think he was telling the truth, or what he thought was the truth. But the—well, the brain, the *draal*—that seems so weird, so incredible—"

"Haven't you yet discovered that this is a weird world?" Graham interrupted. "There isn't a fact in any physics text book, a theorem in any geometry, a statement in any history that isn't downright weird when you stop and think about it. Yes, the *draal* is weird. So is the brain of a man, so is the brain of a dog, so is the brain of an earth worm."

Graham talked jerkily. His words came from the top part of his mind. The rest of his mind was concentrated on what was happening down there in that building at the foot of the hill. Would Featherstone succeed?

Mildred Chambers sensed and voiced his thoughts.

"Do—you think he will be able—to smash it? she whispered.

"He's got to smash it!" Graham answered fiercely. "And how I hate the the thought of that!"

"What?" the girl gasped in surprise. "You mean you don't want him to succeed?"

"It isn't that," Graham answered. "He's got to succeed. It's—do you realize that this is the first time in human history when a man has had a chance to talk to a reasoning creature other than his own kind? The stories the *draal* could tell! Its origin

its history, where it came from—these things would be tremendously interesting and valuable to us. I hate to have to destroy the source of so much information. That's what I mean. The *draal* unquestionably has to be destroyed, if the human race is to continue its existence. Yet I hate to destroy something that could do so much for us. I think Featherstone feels the same way I do. Both of us know that the *draal* is like a stolen million dollar bill. It's worth a mint to you, but if you try to spend it, you'll get thrown in jail for the rest of your life."

The wind tugged at the curtain. Footsteps sounded on the path outside. The door opened. Louie entered.

"What happened?" Graham demanded.

The little man was trembling. He wiped sweat from his face, tried to think what happened.

"He sent me back," Louie said. "We took the box inside the building and he said I could come back up here. I think he was afraid I might reveal too much."

"Has he smashed it?"

"Not when I left, he hadn't." Louie remembered the other things that had happened.

There's only one dreth down there," he said.

"Eh?"

"And there's a dead man just outside the building!"

"A dead man?"

"Yes. A state trooper."

"A state trooper? Where did he come from?"

"I don't know," Louie answered. "There's one other thing—" He frowned, tried to think.

"Oh, yes. I remember now. There are lights in the sky."

"What?"

If you step outside, you can see them."

THE LIGHTS weren't in the sky. They were down on the horizon and were reflected against the sky. There were two small glows to the east and toward the north there was a bigger one. At the nearer glow, tiny tips of flame could be seen reaching up into the night.

"Fires," Graham said. "I'm guessing but I think those two smaller glows are houses on fire. The bigger one—"

He paused as a sudden thought popped into his mind. "Louie, where is Elm Point? What direction is it from here?"

The little man's finger pointed in the direction of the biggest glow of light. "It's right about there," he said.

"That's what I was afraid of," Graham answered.

"What do you think it is?" Mildred Chambers asked.

"I think it isn't any more," Graham answered. "I think it's burning down. I think the whole town is on fire. And I think the glow nearest to us is coming from the burning house of a farmer named Wakely."

"Oh."

Graham was silent. He could smell smoke now. Smoke in the drifting wind. The odor was dim but it was certainly the smell of smoke.

"Did you say there was only one *dreth* down there now?" Graham asked.

"There was no answer. Graham looked quickly around. Louie was gone.

"I don't blame him," Graham said. "And I think—" He looked at the girl. "How did you get here?"

"Where did—what did you say?"

"How did you get here?"

"In my car."

"Where is it?"

"Parked up there on the side of the road."

"I think you had better go to your car and use it to get to hell away from here. Come on. I'll take you up to it."

He took her by the arm, gently pushed her toward the road. When she protested, he didn't insist.

"You may be right at that," he said. "It may not be exactly easy to get away from here."

He wasn't paying much attention to what he was saying. He was watching a new glow of light that was coming into existence off to the left and a mile or two away.

Off there in the darkness another farmer's house and barn were going up in flames.

The night was peaceful, calm, serene. The moon shone placidly over the rounded hills. There was no hint of danger, no suggestion that anything was wrong except the fires that were throwing their glow on the dark curtain of the night.

Down below them a rectangle of intensely violet light suddenly appeared as a door opened in the squat building that had been erected there. Featherstone came out of the building.

They heard him close the door. They heard him coming up the path toward them. As he walked up the path in the smoky darkness, they could hear him giggling. He saw them standing in the path, stopped and stared at them, then giggled again.

"It was waiting for me," he said. "All the time I was talking to you, it was reading my mind. When I went inside the building it was waiting for me and it had a *dreth* all ready for action."

He giggled again.

GRAHAM took one step forward. Smack! His open hand struck Featherstone's face.



"Damn you!" Featherstone snarled. "Damn you, Graham. Who the hell do you think you are?"

Graham stepped back. "You were giggling," he said.

"I was—what? Oh." Wonder was in Featherstone's voice. "Oh I see. Thanks. Or maybe I shouldn't thank you. Maybe it would have been better to go crazy."

"What happened?" Graham said.

"What happened? Oh. A cop happened. A state trooper. I don't know where in the hell he came from or why he turned up here, but while we were talking, he was snooping around. He tried to go into that building. That's all, brother, that's all. We've got a dead cop on our hands."

"So Louie said."

"Did Louie tell you about him? He did? Well, did he tell you the rest of it?"

"No."

"The rest of it—" Featherstone sounded like he was about to start giggling around. "The *draal* thought the cop was trying to attack it. I don't know what that cop was thinking while he was snooping around but the *draal* certainly thought he was dangerous. He scared the *draal*. The *draal* not only killed him but decided it would clear out all the humans within a radius of ten miles of here. It would be safer, the *draal* decided. It's clearing them out now."

Featherstone nodded toward the circle of fires on the skyline. While he talked, another one had popped into existence.

"Compared to what's happening around here right now, hell's fire and brimstone raining from the sky would be like a summer shower. Hell's out for noon, Graham, hell's out for noon for sure."

In the darkness the night wind was tangy with the pungent odor of smoke.

Featherstone looked at Graham.

"The *draal* wants to talk to you," he said. "To both of you. Yes, it knows you are here. It sent me to tell you to come down and talk about it."

"In that case," Graham answered. "I guess we had better go talk to it."

"I guess you had," Featherstone said. "If you want to stay alive."

As they went down the path together, Featherstone started giggling again.

"It says it can use us," he said. "It says that's the reason we're still alive."

Featherstone led the way into the building. Graham followed him. Mildred Chambers entered last. This was one situation where ladies did not go first.

The big room was bright with violet light.

THE *draal* lay in a cup-like receptacle. Around it and under it was some sort of a complicated electrical machine. Relays were clicking softly in the machine, transformers were humming. A maze of wires ran from the relays to the cup in which the *draal* lay. Through the wires it controlled the operations of the machine.

Graham could not guess the purpose of the machine.

As he entered the room, he was aware something had suddenly entered his mind and he knew that the *draal* was probing through the channels of his brain as it read his thoughts.

"That is close enough," a voice whispered in his mind.

Ten feet away from the machine, it stopped them. It would not let them come closer.

Above the machine, darting like a huge bee in the sunlight, moving too rapidly for the eye to follow, was a *dreth*.

On guard!

Like three slaves, they stood in a row facing the *draal*.

It read their minds.

Graham knew that he was being weighed and measured as a potential antagonist. How dangerous was he? How dangerous was the girl? The *draal* wanted to use them as tools but it also wanted to know how dangerous were the tools it proposed to use.

It would have preferred to kill them outright, to destroy them. That would have been safest. But for some reason it needed them, had to use them, and it could not kill them until its need for them was finished.

It was evaluating them as potential danger spots.

Graham rigidly excluded such thinking from his conscious mind—he did not want the *draal* to know he knew what it was doing—but far under the surface of his mind he knew why the *draal* was studying them so carefully.

It had to use dangerous tools. And it was afraid of them. Therefore in some way they did not know about, they menaced its safety. It had a weak spot.

Then it spoke.

"There is work to be done," a voice whispered in Graham's mind. "You must do that work. If you do it well, you will be well rewarded."

There was a strong hypnotic quality in the voice that whispered through his mind, a seductive, luring quality. It urged him to do what the brain wanted done, then it talked about the reward that would be his.

That reward was knowledge. If he helped the *draal*, it would give him knowledge, it would lift aside the veil that curtained the truth, would help him learn some of the things he had always wanted to know.

In the rigidly partitioned-off part of his mind that he was keeping from thinking, he knew the *draal* had discovered the outstanding facet of his character—the urge to know—and had shrewdly taken advantage of it in offering him his reward for service.

He shook his head.

"No," he said.

Featherstone looked quickly at him.

"Have you gone mad?" Featherstone demanded.

"Probably," Graham answered. "But sane or mad, I will not aid the thing in that machine until I know what I am doing."

"Ah!" the *draal* said.

The *dreth* moved toward Graham.

"No!" Featherstone shouted. "He doesn't know what he's saying. He will do the work that must be done."

"I know he will," the *draal's* mental whisper came. "But first he needs a lesson."

Out from the swiftly moving *dreth* a flash of almost invisible light puffed. It struck Graham.

Mildred Chambers screamed. Featherstone looked appalled.

Pain, red, raging, dripping, pain, tore Graham's body apart.

Suddenly he knew why the little dog in the steel box in Featherstone's studio had howled in pain. The same thing that had happened to the dog was happening to him.

He was being turned into bone.

He couldn't move a muscle in his body.

Pain struck every nerve ending in his body.

He tried to scream and his lungs wouldn't work.

Abruptly the flashing light was gone from the *dreth*.

The pain relaxed its numbing hold and Graham could breathe again.

"You can do the work I want done, or you can have more of this," the *draal* whispered in his mind. "Take your choice."

"I'll work," Graham faltered.

He knew he had no choice.

"Then get busy," the *draal* said.

It told them what was to be done.

**T**HE VOICE of the announcer coming over the radio was almost hysterical.

"An entire community in the northern part of New York state was wiped out last night by fires of mysterious origin," the announcer said. "Fragmentary reports, far from complete as yet, indicate the death toll may run into thousands. The pilot of an observation plane which flew over the area early this morning reported that the small town of Elm Point has been completely destroyed and that hundreds of fires are still smouldering in and around the town. According to this same report, every farmhouse and barn in the vicinity of Elm Point is a pile of blackened ashes. There has been no communication with Elm Point since late last night.

"Scientists who had been called in can advance no suggestion as to the cause of the catastrophe but hints from other sources indicate that possibly some type of atomic reaction has taken place in this area.

"Exploring parties are carefully approaching the town of Elm Point.

"Units of the National Guard have been mobilized.

"The question is asked: 'Has the United States been attacked?'

"Is this war?

"If this is war, what nation is attacking this country?

"Further reports will follow as soon as they are received in this studio. Keep tuned to this station for the news."

The voice of the announcer went

into silence.

Graham tiredly shut off the radio.

There was reason for his being tired. He had worked all night long.

It was noon before the *draal* permitted them to stop for a minute. Then it allowed them to leave the big building at the foot of the hill and to come up to the house and prepare food for themselves. After that, they could rest for three hours.

Then back to work.

The *draal* realized they needed food and rest if they were to continue working.

It had no intention of killing them before they had finished constructing the odd piece of electrical equipment they were working so hard to assemble.

They were its hands, its tools. As such, they were valuable to it.

When they left the building at the foot of the hill and came up to the house to prepare food, a *dreth* came with them.

Never still for an instant, it darted around the room above their heads, always watching them.

The eyes of the girl tried to follow the *dreth* as it darted around the room. Fatigue and fear had drained all color out of her face. She had worked side by side with the two men. The *draal* had not spared her because she was a woman.

"What are we going to do?" she whispered.

"What can we do?" Featherstone answered. "That damned thing can read our minds. No matter what we try to do, it will know what we are planning before we do it."

"I think I can tell when it's trying to read my mind," Graham said. "I get little darting pains high up in my forehead every time it starts probing into my brain."

**F**EATHERSTONE looked up quickly. "Then you've got some-

thing," he said. "I've never been able to tell when it was reading my mind and when it wasn't. If you can tell when it's reading your mind, then you know when it's safe for you to think. Maybe—maybe you can think of something to do."

"That's the catch," Graham wryly answered. "I know when it's safe to think but I can't think of anything. I just don't know enough. There's a weakness somewhere. I know that much. I suspect the weakness has something to do with that piece of machinery we're putting together. But I don't know what it is."

"Think, man!" Featherstone urged. "And keep any discoveries you make to yourself. Don't try to tell me anything you find out. The *draal* might find them out by reading my mind."

A flash of fire showed on Featherstone's lean face as he spoke.

Like Graham and the girl, Featherstone was desperately tired and almost beyond hope. Graham's words brought a spark of life back to him.

To fight the *draal*, they needed to know much more about it than they knew. Its strength, its weaknesses, if any, how it worked, what it was trying to do—they needed to know these things. Not knowing them, they were like sleepwalkers in the dark. Any misstep might lead to destruction. And they didn't know when they were taking a misstep because they didn't know what was right and what was wrong. If they made a move that definitely threatened the *draal*, the result would be swift and exceedingly painful death.

That didn't matter. All three of them were long past the point of thinking about themselves. What did matter was that the *draal* must not be permitted to consolidate its position, it must not be permitted to increase its strength.

There was only room on the planet for one ruling race.

"I want to know what that machine is we're being forced to build," Graham said. "I think the clue to the weakness of the *draal* is in that machine—"

Little prickles of pain squirmed through his brain as he spoke.

He quickly forced himself to think about something else. He tried to watch the *dreth* circling over their heads. He let horror of that weird little monstrosity flood through his mind.

The *draal* was trying to read his mind.

It was on guard. It was watchful. It was alert.

Graham ignored the little darting pains high up behind his forehead. Eventually they went away. He dared to breathe again.

Two hours later the *dreth* herded them back down the hill to the building where the *draal* waited.

"Back to work!" the order flowed into their minds. "Back to work."

There was insistence in the whisper in their minds. The *draal* wanted them to hurry. It wanted them to finish the job it was making them do. That job was important. They must work as fast as they could.

Graham glanced over at the cup-like receptacle where the crystal ball with the central core of blackness rested. He could see little glimmering lights moving in that core of blackness and he knew that the *draal* was watching him.

Darting pains moved behind his forehead.

"Work," the *draal* said, in his mind. "The new energy source—"

The thinking blanked out.

Graham's face showed nothing. He kept his mind under rigid control. But he knew what they were building.

IT WAS A generator, an electrical generator. Unlike any dynamo

ever built on earth, it worked on some new and unknown principle, but it was unquestionably an electrical generator. The cables they had already installed and connected to a heavy switch that fed into the power lines that came into the building. The switch was open. Graham had assumed that when the switch was closed current would flow from the power lines to the machine they were assembling. He saw now that the reverse was true. When the switch was closed, current would flow *from* the generator to the intricate piece of electrical machinery that served as a support for the crystal ball that was the *draal*.

"Power," he thought. "We're building a new source of power for it. It needs this new power source desperately. I wonder why?"

The *draal* was getting the power it used from the high line that had been extended to his building. The faint hum of the transformer on the poles outside was audible inside the big room.

Plenty of power was coming in over that high line.

Why did the *draal* need a new source of power?

The racing motor of a fighter-bomber tore a hole in the air as the ship passed less than a hundred feet above the roof of the building.

*Boom!*

The building rocked on its foundations.

Graham picked himself up off the floor. Featherstone and Mildred Chambers looked dazedly up at him. The explosion had thrown them to the floor also.

"What—what was that?" the girl whispered.

"That," said Graham indifferently, "was a bomb. Probably a five hundred pounder—"

As though nothing had happened, he started back to work on the ma-

chine they were assembling.

"A bomb?" the girl questioned.

"Yes," Graham answered. "Hand me that screwdriver, will you? One of these screws has stripped its threads and must be removed."

He kept his face expressionless, he kept all thoughts of exultation out of his mind. Prickles of pain behind his forehead warned him not to do any thinking.

Subconsciously he knew what had happened. That was an army plane that had passed overhead, a fighter-bomber. It had dropped a bomb aimed at this building.

Somebody outside, somebody in authority, knew what was happening. Somebody knew that the source of the mysterious fires that had destroyed Elm Point and the surrounding community had their source in this building. Fighter-bombers were moving up. There were certainly armored cars back there on the roads, possibly even tanks. The country had armored cars and tanks to burn.

The appearance of the plane meant one thing: Louie had escaped. The little man in the baggy clothes, the little man who had been so scared, had gotten to someone in authority and told his story.

Deep in his mind Graham wondered how Louie had ever managed to convince a public official that he was telling the truth. Louie's story must have sounded utterly fantastic. But he had convinced somebody that it was the truth. Of course, Louie had the evidence of a destroyed town and innumerable burned farmhouses to back him up. That must have helped a lot. Anyhow he had certainly told his story, he had convinced somebody that something housed in this building must be destroyed no matter what the cost.

A fighter-bomber had been sent to do the job.

Its first bomb had missed.

The plane's motor roared somewhere off in the sky as it made a turn and started back to drop a second bomb.

"They're aiming at us," Featherstone said.

"Oh, no," Graham answered. "Nothing like that."

**F**EATHERSTONE'S face was a study in mixed emotions. He knew he was a target for the next bomb. He knew, also, that something else was also the target. He knew he couldn't run.

The *draal* wouldn't let him run. The *dreth* would kill him if he tried to run.

All he could do was wait.

In that moment, greatness showed in Featherstone. He managed to grin. And went back to work.

He completely ignored the racing motor in the sky.

Graham desperately controlled his mind.

The *draal* was trying to find out what was happening. The explosion of that bomb had certainly jarred it.

It suspected, must certainly know, that it was being attacked.

But it didn't know what was attacking it, or how the attack was coming.

If they knew very little about it, it, in turn, knew very little about them. The great outside world, the world of cities and nations, the world of men and machines, of fighting men and fighting machines, it knew little or nothing about this world.

It didn't even know there were such things as fighter-bombers.

All it knew was that something had roared through the sky and then there had been an explosion.

It was trying to find out what was happening. It was trying to get information on that roar in the sky and that shattering explosion from the minds of the humans in the room.

They closed their minds.

They told it nothing.

The howl of the motor was growing louder.

The plane was circling preparatory to making another run on its target.

This time the pilot would not miss his aim.

Acting as if nothing whatsoever was happening, the three humans worked calmly on the generator they were fitting together. Featherstone rose to his feet and went to one of the packing boxes for another part. Acting on instructions from the *draal*, he had ordered these parts from a large electrical supply house. Now he was quietly helping fit them together.

So far as his face showed or his mind revealed, there were no such things as airplanes and bombs on earth.

**M**ILDRED CHAMBERS incautiously dropped a heavy housing on a finger. She swore and put the mashed digit in her mouth.

She had never heard of such a thing as a five hundred pound bomb.

Graham removed the screw with stripped threads from its seat.

Far up in the sky, he heard the plane start its dive toward them.

The pilot of that plane was incautious. Nobody was shooting at him, he didn't think there was any danger. He shoved the nose of his ship down toward his target.

Graham felt the pains abruptly vanish from his forehead.

The *draal* had ceased trying to read his mind. It has stopped trying to find out what was happening from him.

It had sought other sources for the information it needed.

The motor of the diving plane was overhead.

Thunder exploded in the sky.

Wincing, Graham listened. At that moment, he would have given his life

for the sound of a diving motor.

He heard no such sound.

There was no such sound in the sky.

There wasn't even an airplane in the sky any more.

There was only bits of shattered metal and fragments of flesh plunging down to earth.

A *dreth*, on guard somewhere overhead, had been sent to meet the plane.

The plane had exploded.

There was silence in the big room. Under the cup-like depression where the *draal* rested, relays clicked furiously. There was no other sound.

Outside there were several thumps as pieces of shattered metal hit the ground.

Featherstone looked like a man who has just heard his death sentence pronounced.

The three humans had automatically stopped working, when they heard the plane explode.

"Back to work!" the voice of the *draal* lashed their minds. "Hurry. Work faster."

As he hastily resumed his interrupted task, Graham heard another sound—the far-off throb of many motors in the sky.

Not one motor this time.

Many motors.

**T**HE MOTORS in the sky moved closer. There were six or seven planes at least in the flight. Judging by the racket they were making, they were twin-engined bombers.

The *draal* had destroyed a single plane. Would it be able to destroy a flight of bombers?

Graham could hear relays clicking frantically in the electrical equipment housed under the *draal*. Somewhere in the sky overhead he had a vision of *dreths* racing madly in response to those clicking relays. Four of the *dreths* were available to

fight the planes. One *dreth* remained in the room with them, constantly on guard. As long as that hideous little monstrosity darted around them like a giant bee, they were helpless.

The motors were as loud as thunder in the sky, gnawing at the air like a giant hound gnawing a bone.

*Boom!*

Real thunder shook the foundations of the earth.

Graham groaned. He knew what that clap of thunder meant. A *dreth* had either passed through the fuel tanks of a bomber, exploding the gasoline, or it had exploded the bombs in the racks of the plane. Either way, the answer was the same.

A plane exploding in blazing wrath!

Panic hit the flight of bombers. Graham heard the even drone of the motors change as the pilots broke formation.

The pilots didn't know what was happening. One of their ships had exploded. They suspected that some sort of a radar beam was being used against them that blew up their fuel tanks. They didn't know what they were fighting. Their orders were to blow up the group of buildings on the side of the hill. It looked so easy they were suspicious. When one of their ships exploded without apparent cause, panic hit them. They would have rode through a sky full of blasting ack-ack, they would have fought their way through to their objective against fighter opposition, but the mysterious explosion of one of their ships startled them into momentary panic. They broke formation.

And as they started to scatter, another one of their planes exploded.

They couldn't see what was attacking them but they knew now that they were being attacked. The explosion of the first ship might have been an accident, but when two ships exploded, the possibility of accident



was ruled out.

The three humans in the laboratory heard the sound of motors die out in the sky.

There was a note of triumph in the rattle of clicking relays under the *draal*.

There seemed, somehow, to be fewer of the relays in operation now. There had been several and the clicking had been almost continuous. Now there seemed to be only two of the little instruments in operation.

"Work!" the *draal* snarled in their minds.

As they bent again to their task, the spray of violet light at the far end of the room quickened in intensity. Simultaneously the throb of the transformers grew more labored.

More power was being taken from the high line.

"Another *dreth* is being created," Featherstone whispered, in answer to the question on Graham's face. He nodded toward the spray of violet light. "That's where the *dreths* are created."

"Reinforcements?" Graham said.

"Replacements rather than reinforcements," Featherstone said.

"Eh? I don't understand."

"Listen to the relays," Featherstone answered. "Each relay controls a *dreth*."

GRAHAM HAD already noticed that fewer relays seemed to be in operation. He listened closely. Only two relays were working.

"What happened to the three other *dreths*?" the almost soundless whisper formed on his lips.

"They destroyed the planes and were themselves destroyed in the explosion," Featherstone explained.

"Then there are only two *dreths* left!" Graham said. "The one in here watching us and one somewhere on guard outside. If those planes will only come back now!"

One *dreth* was on guard somewhere outside. Three others had been destroyed. If the planes would only return, one plane would be smashed but the others would get through to drop their bombs without molestation.

Graham listened. The sky was quiet. There was no sound in the still air of the late afternoon.

Somewhere off in the distance the planes were no doubt reporting in and asking for further instructions.

Would they be ordered to continue the attack or would they be pulled off?

In war, they would be ordered back to the attack. But the country wasn't officially at war. With two planes already lost, it would be a brave commander who risked further destruction of his ships, further loss of life, until a complete investigation had revealed the necessity for the action.

In the spray of violet light at the far end of the room Graham saw something rise up.

A new *dreth*.

A new balance of blended force and counterforce.

It moved sluggishly in the violet glow. Like a butterfly that has just crawled from its cocoon and is growing wings in the sunlight, the *dreth* drifted uncertainly in the violet light.

The violet light was developing it, giving it strength.

Under the *draal* a new relay began to click slowly.

Working feverishly at the generator they were building, Graham felt like praying.

*Whoom!*

Something that tore through the air like an express train just missed the roof of the building. It exploded two or three hundred yards away.

It was a shell from a 90 millimeter cannon that was mounted on a tank destroyer.

While the planes had attacked overhead, units of the ground forces had moved into position.

The first shell they fired had missed.

Graham groaned. They would never get to fire another shell. The single *dreth* that remained outside would blow the tank destroyer to bits and before another attack could be launched, the new *dreth* growing stronger by the second in the violet spray would be ready for action.

He looked at the *dreth* in the violet light to see how far advanced it was.

The light was gone.

The violet spray was not flooding upward.

He was suddenly aware that two sounds that had been always present in the laboratory were now missing. The clicking of the relays and the labored hum of the transformers drawing current from the high line.

These sounds were still.

The transformer was silent.

The relays were still.

Something, drifting like a falling leaf, was floating to the floor before his eyes.

He needed seconds to realize what it was.

Then he recognized it.

It was the *dreth* that had been guarding them.

Powerless, it floated downward.

"The power is off!" Graham heard himself shouting. "The power is off."

He was already on his feet and racing toward the crucible that held the crystal ball that was the *draal*.

"Stay away! Stay away from me! I'll turn the *dreth* on you!" Weak thought impulses chattered in his mind.

The *draal* sounded like a frightened monkey seeing death approach.

Graham and Featherstone were both darting toward it. Both had realized what had happened. Graham got

there first. He jerked the *draal* out of the receptacle where it rested. Simultaneously he turned and shouted at Mildred Chambers.

"Get outside and wave a white flag. Wave anything but get outside before that tank destroyer takes a second shot at us."

She staggered rather than ran to the door. They could hear her screaming outside.

The second shot didn't come.

GRAHAM HELD the crystal ball in both hands. Weak impulses, generated by the tiny store of energy the *draal* maintained inside itself, whispered in his brain. The *draal* promised rewards if he would help it. It promised him anything he wanted, wealth, power, knowledge.

He laughed.

"Smash it!" Featherstone urged, trying to snatch the crystal ball away from him.

He shoved Featherstone away.

"Smash this?" Graham questioned. "Not until it keeps the promise it made me."

"It's dangerous," Featherstone urged.

"I know it's dangerous but I also know how to control it, now. No, we won't smash it, Swami. We'll just keep it from gaining access to any source of power until we learn everything it knows. We know its secret, Swami, we knew it the instant that shell smashed the high line leading into this building. It's got to have power to operate, power to send forth the *dreths*, power to create them, power to control them. Without power, it's helpless. That's what it was making us build, Swami: a generator to supply power for it. It knew the high line might be broken or the power might be turned off. If that happened, it had to have a source of power that would not fail. That was why it was in such

a desperate hurry to get us to finish that generator. Power! It had to have electrical energy, plenty of it. Without that, it's helpless. We'll keep it from getting power until we find out its real history. Think of that, Featherstone! Think of it!"

Graham was a little hysterical. All his life he had sought to push aside if only for a little while the veil over the face of truth. Now he had in his hands a creature that possessed knowledge beyond that of all the human race. True, the creature was dangerous, it was deadly, but it could be guarded, and Graham had no intention of destroying it until he learned what it knew.

When the men of the guard came cautiously forward in response to the girl waving a tiny pocket handkerchief, they found the two men guarding very, very carefully what looked like a most unusual crystal ball.

They're still guarding that crystal ball, these two men and one woman, guarding it with their lives.

The whole story of the unusual events in and around the town of Elm Point has long since died out in the newspapers. The public has forgotten what happened there.

But two men and one woman have not forgotten. They live in an old house on a quiet side street in New York City, an old house that has a high stone wall around it, to keep out intruders.

In one of the rooms in that old house is a large safe constructed of a special grade of beryl steel so tough that even a torch would not cut it. The combination to that safe is known to only three people on earth.

Within that safe is kept a crystal ball. Daily they take the ball from its resting place and daily they force it to reveal to them more and more of its history. And a strange history it is.

Some day they hope to learn from it a little of how the universe is constructed.

THE END

## ELECTRIC BRIDGES

★ By RAMSEY SINCLAIR ★

ANYONE WHO has ever taken high school physics is familiar with the famous Wheatstone "bridge." And whether he knows it or not the electrical "bridge" is one of the most important types of circuits now in existence. In the modern world of calculators, rockets, guided missiles, radio and electrical machines of all kinds, the bridge circuit finds its greatest application. This is because a bridge circuit can be made to act automatically. And that's how it's used.

A bridge circuit generally consists of four branches or arms, schematically usually shown in the form of a diamond. The arms may contain resistances, capacitances or inductances. A voltage is applied across one of the apex-sets of the diamond. A meter is set across the other apex-set. When the bridge circuit is "balanced" no current flows through the meter and a "null" or "zero" is indicated.

Aside from using such an arrangement as a measuring instrument in which three

known quantities are compared with a fourth unknown, the bridge finds its greatest utility in automatic devices, for the amount of unbalance of a circuit can be used to bring the bridge back into balance. This is the secret and core of automatic pilots, radar finding apparatus, temperature controlling devices, and most automatic machinery.

The bridge thus gives a method of comparison by machine. The technique of comparison is used in the human body in a more sensitive but essentially similar way. Thus we learn to estimate distances with our binocular vision through experience. There are certain standards gradually built into our sight-mechanism and our minds.

When the wonders of the last half of the twentieth century start to unfold, you can be sure that they will depend to an amazing extent on the use of bridges of one kind or another.

\* \* \*

# READER'S PAGE

## WORD FROM MALAYA

Sirs:

This is the first letter I have written to any editor. FA is one of my favorite reading pleasures, and every time I read it I mean to write to you, but this is the first time I am really doing it.

As a steady reader, I sincerely wish to congratulate you for the fine work you did in 1948. I'd like to list the five stories that I think were really tops during that period:

1. "Forgotten Worlds"
2. "Zero A.D."
3. "The Man From Yesterday"
4. "Queen of the Panther World"
5. "Lair of the Grimalkin"

Incidentally, I find it very difficult to get my usual copy of FA due to currency regulations, so would you mind if I ask some of your readers to send me (if they can) some of the issues they have no use for. At the same time I would like to let them know that I am more than willing to correspond with anyone who cares to write to me.

T. Retnaraja  
Care Of S.K.T. RAJA  
Survey Dept.  
Kota Haru, Kelantan  
Malaya

*It's always a pleasure to hear from a reader in another land. And we know how hard it is to get magazines in other countries, so how about it gang—send a few spare copies to Malaya!.....Ed.*

## SOUTH AFRICAN SOS

Sirs:

This is essentially an SOS from a fan who has been hit in a very tender spot by the South African import restrictions on all pulp magazines.

The printing of this letter in your magazine will therefore be appreciated, if only for the reason of appealing to readers to correspond with me about the current science-fiction and fantasy news. Any kind-hearted fans could also ease my predicament by sending unwanted copies of FA and other sf magazines my way.

Just a word of praise in closing, for Lee Francis, one of your best authors, for his magnificent novel, "The Man From Yesterday." In my opinion it eclipsed even Howard Browne's great "Return Of Tharn" novel.

A. P. van den Berg  
19, St. Hubert Ave.  
Crosby,  
Johannesburg,  
South Africa.

*What we said about the opening letter applies here too. How about it, gang—let's help a fellow fan out.....Ed.*

## WE DONE HIM WRONG

Sirs:

What happened to the "Reader's Page"? Did you lose it or something? Don't tell me you haven't got enough letters to go around... I'll write you every month if I need be! Please get the letter section back. Let's keep the home fires burning!

"I Died Tomorrow" could not have been written by Peter Worth. No living person (assuming that Pete is alive) could have thought up that ending. Wow! I'm marking that yarn as an all-time favorite.

Now for a note to all fans: "How about joining the "Universal Musketeers", a sf correspondence club which later hopes to have a fanzine. All are welcome.

Ronald Friedman  
1980 East 8 St.  
Brooklyn 23, N.Y.

*As you can plainly see, the letter section is back. And we hope to keep it that way from now on. Nope, it wasn't a lack of letters—you should see the pile on our desks! The truth is, we've been changing printers, and because of the change, you've been missing the Reader's Section. But everything is running smoothly now, so your favorite departments will be in every issue from now on.....Ed.*

## FA INSPIRED HIS HOBBY

Sirs:

First off I'd like to tell you that FA has given me plenty of entertainment in reading material. I read each and every story, good and bad—and you don't hear me complain if I happen to find a bad one on occasion, for I know that for every bad one there will be at least a half a dozen that I will like. Who can ask for more than that?

Now for the real purpose of this letter. I thought you might be interested in knowing (and other readers too) that FA has inspired a most unusual hobby. I got to wondering what an original costume would be like—if it were made identical to some of those illustrated or featured in FA stories. I began to make sketches and working with different kinds of materials. Finally I dressed a few dolls. It was amazing what they turned out to be like—some beautiful—some grotesque—and a few just plain crazy. (For lack of a better description.)

For example, I couldn't get a certain type helmet to look as it did in the picture. No material that I tried was satisfactory.

Finally I hit on the idea of colored salt made into a moist paste and worked in netting as a design, and then lacquered. It was just what I had been looking for. Shredded cactus mixed with clear lacquer makes a very realistic skin for some of the out-of-this-world characters.

Another trick I use is cigarette ashes sprinkled from a salt shaker on clear lacquer. Dry and rub off gently. This gives an unusual type of skin effect for other alien characters depicted in stories. So you can see, from this brief description, that FA has really been an inspiration to me.

Naturally I look forward to your artwork in each issue. May I gently suggest you have your artists work a little more in detail on costumes for characters? You can see the reason why!

Fern Hendrikson  
898 N. Main St.  
Carlsbad, New Mex.

*You really have our curiosity aroused, Fern, and we'll bet that every other reader of FA feels the same way. We think you've really hit on something unusual in the field of stf, and something that certainly should be developed. We're also sure that you'll be hearing from other FA readers, and as for ourselves, we sure would like to see one of these dolls from an FA story.....Ed.*

# NO MORE SERIALS

Sirs:

I have read your magazine for six years and have enjoyed it very much. Mainly because all the stories have been complete as you advertise on your contents page.

I want to be the first to say that any magazine that has to run continued stories to sell the book is a fourth-class book as far as I'm concerned.

I purchased FA the other evening, and would like to state that this is one issue (June) that is headed for the junk pile. The serial is responsible for this. I think serials tend to confuse and disgust the reader. From now on I will be forced to preview the contents page before buying the magazine. I don't want to be hood winked into any more serials!

M. Reese  
453 Church St.  
Mobile, Ala.

*First of all, we'd like to apologize for listing the June issue as having only complete stories. You're absolutely right, we were wrong, and we bow our heads in editorial shame. But your deduction as to why we ran "The Eye of the World" as a serial is erroneous, and we'd like to explain why. We didn't run the story as a serial to help sell the book—FA sells without that kind of help! The truth is, the story was just too long to be contained in one issue and still give the reader a balanced issue of shorts and novelettes. Don't forget, the story was a full eighty thou-*

*sand words, and that's a lot of words in any magazine! So, even though running serials is not a policy of FA—and will never be as far as we can see right now—we ran Alex Blade's novel in two parts so you'd have a lot more to read besides the novel. Another factor we had to consider at the time was the cut in pages we were forced to assume while we changed printers. Now you will note that the magazine has been increased in size again—so in the future we'll be able to run novels in one issue—complete!.....Ed.*

# SOUR GRAPES AND SUGAR

Sirs:

This once I'm going to register a complaint with the Editor of FA. (But don't run away mad before you read this as I'll have something nice to say too!) My gripe of the moment is the story by Richard Shaver in the June issue, "The Cyclopeans." That "thing", I can't bring myself to call it a story—was lousy! Its plot was not only unreal (the so-called Cyclopeans acted very much like normal human beings), and the writing was not only awful, but the stuff about the moon was actually lifted from another story AS ran recently. Also, the story smacked of the "caves", so that's enough to kill it with me. I hate caves!

But now you force me to extend profound thanks. Recently I have noted that you were printing long novels, in the 50,000 word length class. So what do you do. You cross me up—you give us 80,000 words! Sure it's a serial, but in reading other magazines I'm used to serials by now. Anyway, "Eye of the World" is magnificent! The best story you've had in many an issue—at least it will be, if the second part is as good as the first. As far as I'm concerned, Alex Blade has a story that Hollywood could make a super film out of. It's got everything—humor, excitement, stf, and plenty of suspense.

If the story was really built around the cover, then the story would have to be good, because the cover was excellent. But why, on the title page, must you say "illustrating a scene from—" when actually the scene from "Eye of the World" is really illustrating the cover? Oh well, these little paradoxes pop up now and then.

"Haunted House" took an easy second in the issue. And rest assured I'm looking forward to the new one—especially the long awaited Phillips novel...

W. Paul Ganley  
119 Ward Road  
N. Tonawanda, N.Y.

*Glad you liked Blade's serial so well, Paul. And now that you mention it, that business of "illustrating a scene from—" etc. is a bit confusing in a case where the author wrote the story around the cover. We'll have to remember that. Guess it's just less confusing to say "illustrating a scene from—" than to say "cover painted and story written around same." But you have got a point.....Ed.*

# THE BEACONS MUST





# BURN

Earthmen were safe on Io while the beacons burned—so the aliens knew what to do . . .

By **WARREN KASTEL**

**C**LAY BOWEN sensed trouble even at his first glimpse of the two men in spacesuits who stood at the outer door of the airlock, waiting to enter. Though dim in the viewing screen, their faces behind the glassite ports of their helmets were

stern and hard. Foreboding brought a sudden chill to Bowen.

The young beacon tender of Station 12 on Io knew that he couldn't take chances with these men. The ominous newscasts which had been coming on the televideo during the last few



He pointed to the great man-made structure in the valley far below them . . .



weeks were still vivid in his mind. So instead of pulling the lever which would open the airlock, Clay Bowen switched on the communicator.

"What do you want?" he demanded tensely.

"It's all right, kid," the answer came. "We're Interplanetary Rangers, both of us. Here's our credentials."

A metal-gloved hand loomed large in the view-screen. Through narrowed eyes, Clay Bowen inspected the platinum disks which lay in the palm. They were badges of authority possessed only by Interplanetary Rangers, the intrepid men who made up the far-flung police system of the Twenty-first Century. Clay Bowen's doubts vanished. He pulled the release lever.

Shortly, the two Rangers clumped into the airlock foyer, and the inner door hissed shut behind them. Without speaking, they removed their heavy metal suits, hanging them up on the prongs which projected from each side of the tiny room.

The taller of the two Rangers swung around to face Bowen.

"Name's Nick Searles. This"—gesturing to the other—"is Andy Platt. You're Clay Bowen, in charge of this station?"

Bowen nodded slowly, level grey eyes fixed upon the faces of the others. His lean body showed compact strength, and there was a military stiffness about his back and shoulders. A suggestion of easy humor hung about his wide mouth and angular jaws.

NICK SEARLES pulled a blackened pipe from a pocket of his green and gold uniform and began to fill it. Andy Platt's mouth already bulged from a generous cud of tobacco. Searles said:

"Bowen, we're here on serious busi-

ness. General Headquarters has good reason to believe that an attack upon this station is going to be made in the very near future."

The Ranger's words came as no great surprise to Clay Bowen. In a dim way, he had already expected them. The televideo hadn't given full details of the vast crime wave which had lately engulfed the void, but Bowen had been able to read between the lines.

Searles lit his pipe, blew out a plume of smoke. He went on:

"Several of the beacon stations scattered throughout the Asteroid Belt have been wrecked, their tenders murdered. The first attack was made upon the Deimos station. Later, spreading from the orbit of Mars outward, the attackers gradually snuffed out beacon stations in the Asteroid Belt as far as Vesta and Eros. So you can see why we think this station is due for an attack at almost any time now. Of course, we're not sure which of the stations on the Jovian satellites is going to be attacked first, but Rangers have been assigned to all of them. It's a good bet, however, that the primary satellites are due first.

"Platt and I are here to see that nothing of the sort happens to you or your station. We're to stay until further orders. You can put us up wherever it won't interfere with your regular duties."

Andy Platt came forward, shifting his cud.

"What Nick told you ain't covered everything," he put in, speaking in a twangy drawl. "Beacon stations ain't the only ones that've been attacked. Ships've gotten their share of the trouble, too. Us Rangers've already found five or six hulks, looted of almost everything they carried, the whole crew wiped out. Mind you, this

is sayin' the ships we've found. There's a lot of others missin' that we ain't found yet."

"But what is it all about?" Bowen asked wonderingly. "Who is behind this?"

"Pirates, of course," Searles answered. "And from the looks of things, a pretty big gang of them. But who's leading them, we don't know. Might be Cass Rudler, Flash Barth, or any other of the big-shot buccaners. One thing is certain, though—they've been planning and preparing for this series of raids for a mighty long time." Searles gestured confidently.

"But you can bet that they won't last long. Sooner or later they're going to make a mistake—and that mistake's going to be their last. But maybe they won't have time to make a mistake either. The Fleet is getting ready for an expedition to Saturn's moons. Few ships have ever gone that far, you know, and G.H.Q. has an idea that the pirates have their base located on one of the moons. If they have, the Fleet will smoke them out."

"Me, I'm hungry," Platt said. "When do we eat?"

"I'll get something ready at once," Bowen offered.

"Do that," Searles said, turning to where his spacesuit hung. "While you're at it, Platt and I are going back to the ship and unload our equipment. We've got an electro-bolt cannon and a couple of heat-beams to install."

LATER, they were seated in the section of the station which Bowen humorously called "the lounge." It was really the control room, but since his duties required him to spend most of his time there, he had tried to make it comfortable. He had fur-

nished it with chairs, a table, and a bookcase. These occupied one half of the circular room. The other half was taken up by the beacon controls and the televideo set. Dividing the two halves was a spiraling steel ladder, the upper end of which led to the great beacon in the roof of the tower.

"Been in charge of this station long?" Searles inquired.

"Since just lately," Bowen said. "About two months, standard System time."

"Cadet, eh?" Platt remarked.

Bowen nodded. "Have to serve here a year to earn my stars as navigator, and another two on government freighters before I receive a commission."

Searles said, "It's a lousy system. But I suppose it keeps the applicants down and insures that no half-baked fledgling takes a ship on a suicide flight."

Bowen stared out through the thick glassite window which encircled the room. His eyes were fixed upon the striped immensity of Jupiter edging above the horizon. But he didn't see it, for he was thinking. Thinking of Earth, millions of miles across the void, and the girl who was waiting for him there.

He name was Alice, and she had brown hair that was copper in the sunlight. Her red lips were turned up impishly at the corners, and her eyes were grey-green. He remembered how clear they were, and how the lights within them changed—one moment sparkling, the next soft and tender.

Three years, he decided bitterly, is a long time to wait when you are young and in love. But there was some consolation in the fact that, though the wait seemed unbearable in the present, the rewards would be rich in the future. His salary

would be larger than that of most Earth-bound men, and he would be able to support a wife more than amply. An astronaut is a man of distinction and prestige, commanding respect and admiration everywhere. That, too, would be his.

It had been the government which had made necessary the four year training period before one could become a licensed rocket pilot. The number of space disasters which had accompanied the unrestrained growth of rocket travel had reached such an appalling height by 2152 that the Earth Council had put forth the decree that future rocket pilots would have to undergo an intensive training period before they would be allowed to sit at the controls of a ship. This edict had been astonishingly successful. Where before hardly a week had gone by without the televideo shrieking the news of some accident, now many months passed. The new rocket pilots were not only highly skilled in their trade, but were fully competent both physically and mentally.

**C**LAY BOWEN had already spent a year in the ground schools, where cadets learned what made the star cruisers tick. Now he had entered his second year of training as tender of one of the great space beacons, the lighthouses of star-seas. At its conclusion, and if his record was all right, the silver stars of an astronaut would be pinned to his coat. Then he would serve his last two years as pilot of one of the lumbering government freighters. He would be graduated as a full fledged and licensed pilot, with a commission to take over the controls of one of the great liners which plied the Earth, Mars, Venus routes, at a quite lucrative salary.

But—three years! An eternity, with

Alice waiting for him.

"Funny place, Io," remarked Searles, who had followed Bowen's gaze and was glancing out the circular glassite window. "Heard that the atmosphere is largely neon."

Bowen jerked his mind back to reality.

"It is," he replied. "But it's pretty thin and at a pressure too low to be of any use."

"Reminds me of one of them funny tubes—what do you call 'em?—that the scientists monkey around with," Platt observed.

"You mean vacuum or cathode tubes?" Bowen supplied.

Andy Platt nodded sagely. "Yeah. Well, this place kinda makes me feel as though I was livin' in one."

"It's his intuition," Searles grinned. Of a sudden, his gaze jerked back to the window. He stiffened, staring. "Good Lord—almost caught napping! Andy, here's were we start earning our salaries. There's a ship landing out there—and you know all craft were prohibited from landing at beacon stations!"

Bowen moved with Platt as the latter leaped to his feet. He found himself looking at a strange, cubical silver ship which was landing not fifty yards from the station.

"One of our mysterious pirates, I'll bet!" Platt rapped. "Come on!"

But he and Searles never reached the door. For, staring, Bowen saw a pale beam leap out from the mysterious ship. In the next second, his skin was tingling, going numb. He had time only to gasp out a strangled warning before blackness swept over his brain and he fell sprawling to the floor.

**C**LAY BOWEN awakened with a suddenness and sensation of complete awareness which for a second

left him doubting that he had ever been unconscious at all. He sat up, staring about him. Then he froze into incredulous immobility.

Five figures stood in an ominously silent group near the control panel. Their weapons were pointed with menacing steadiness at Bowen and the two Rangers.

Searles and Platt had awakened almost simultaneously with Bowen. Now they were half sitting up, their uniformed bodies statuesque with the tension that gripped them. Their eyes were widened in dismay and amazement. But mostly amazement.

For everything about the five figures confronting them was chillingly alien. They weren't men. They were things, repulsive and hideous.

The creatures stood upon four, stumpy tentacle-like limbs. Another two gripped strange weapons. They had no heads, only a solid, rectangular trunk of slimy grey, covered with what appeared to be huge, red warts. Each of them was enveloped in thick, transparent coverings.

With a sensation of eerie wonder, Clay Bowen realized that he was facing an extra-terrestrial likeform.

"Jumpin' asteroids!" Andy Platt whispered in horror. "What—what are they?"

As though the sound of his voice had set off a signal, one of the strange beings stepped forward. It was holding three triangle-shaped devices, a black box, and what seemed to be a short staff topped by a cube. With a caution that was not without a hint of menace, the creature handed one of the triangular devices to Bowen, making motions toward the upper part of his trunk. Bowen interpreted this as a sign to place the device about his head.

He hesitated, his lips tightening to a white line. Was this some appar-

atus for torture? Would some strange death strike into his brain?

Bowen looked at Searles and Platt. His gaze shot about the room. There was no escape. The weird beings were standing in attitudes of tense watchfulness. Their tentacular arms, holding weapons, waved like uneasy snakes.

The creature standing before Bowen became insistent. Its tentacles waved commandingly. Somehow, he got the impression that he was not to be harmed.

Abruptly, he shrugged, reached for the device which the creature held before him. He placed it slowly over his head. His head pounding, he watched.

The creature now placed the black box upon the floor. It made adjustments. Then it straightened up, placed the cube part of the staff against the upper part of its trunk.

And then Bowen recoiled with a gasp of incredulous surprise. For, crystal clear and as startling as an unexpected explosion, a thought rang in his mind. He couldn't explain how he understood what was being said to him. He only knew that he understood.

"You will tell your fellow creatures to do likewise. They need not fear harm." The thought was imperative, harsh.

**S**PEAKING SOFTLY, Bowen made known to Searles and Platt what was demanded of them. Searles' lips peeled back from his teeth in a fighting grin.

"Telepathic apparatus, eh? Okay, I'm game. Tell the what-is-it to hand them over."

Gingerly, the two Rangers donned the devices. The first thought they shared with Bowen crackled with anger. The alien had learned of

Searles' last remark through Bowen's mind.

"You will address us with respect, savage!" the alien snarled. "Should you once more fail to show us due humility, I'll blast the life-force from your ugly body!"

Carefully the three men masked their thoughts. They recognized the fact that the least slip in their thinking would bring death.

The alien flicked a tentacle at Bowen.

"You are garbed differently from the other two here, creature. What is your status in this barbaric society? What are your duties?"

Bowen answered warily, holding back all information save what the alien wanted to know.

"And you two," it asked, turning to Searles and Platt. "What are you?"

"Interplanetary Rangers," Searles replied shortly. "Police to you. We knock hell out of the guys who break our laws."

"How quaint! As I have earlier, and quite correctly surmised, your race is indeed at a very low level of development. Laws and guardians!" The alien's thoughts were tinged with contempt. "Just a race of savage bipeds, hopping feebly to and fro on the closer members of their planetary system. Still, a very rich race. Particularly in the heavy metals," it added cryptically.

The alien removed the cube from its trunk and turned to the other four. They entered upon a discussion by a method of communication which the three men could not discern.

Bowen's thoughts were racing. Where had these grotesque creatures come from? What were they doing in the Solar System? He found something dark and ominous about that last question.

What were these beings from out of

the unguessable reaches of the Void doing in the Solar System?

Bowen watched them, lines gathering about his mouth. He was dimly aware that Searles and Platt were holding a hurried, whispered conversation. With a pang of hope, he turned his attention to them.

Platt glanced swiftly at Bowen. He spoke without moving his lips.

"Kid, trouble's goin' to pop. We don't know what these ginks are up to, but it ain't goin' to be nothin' good. They're watchin' us like hawks, an' most likely'll burn us down to a man before we can make a play. Our only bet is that the pirates attack. If they do, it'll give us a chance to do something."

**B**OWEN'S eyes lighted grimly. Here was something he had overlooked. Pirates were due to attack the station. If they came now, they would create a diversion which would enable him and the two Rangers to reach the huge weapons, which had been installed, and blast the aliens out of existence. A slim, far-fetched hope—yet the only hope there was.

The two Rangers were wearing only side-arms. Bowen himself was unarmed. They might possibly dispose of three of the aliens in an outright break, but death from the other two was sure to be the result.

An outside attack was the only hope. It would give Bowen and the others the opportunity they wanted.

It was funny, Bowen thought, but only a short time before, he had been dreading the arrival of the pirates. Now he was praying for them to come.

The leader of the aliens swung around to the three men, placing the cube once more against its trunk. Bowen hastily changed the course of his thoughts. The aliens must never

learn of the pirates until the attack came. In order to cover up any slip which might be made by the two Rangers, he made his thoughts questioning.

"Who are you?" he asked. "Where have you come from? What are you doing here?"

"You show undue temerity!" the answering thought snapped. "However, I see no harm in satisfying your primitive curiosity. Who we are would be meaningless to you. But I believe you might understand me when I say that we are a race from another galaxy. Originally, we were part of a great prospecting expedition, but we happened to stray from the main body of vessels and became lost. Through the sheerest good fortune, we stumbled across your planetary system. It was a find rich beyond all the wildest hopes aroused by our desperate situation."

A chill premonition raced through Bowen. The alien's last thought had been exultant, gloating.

"A rich find?" he asked. "What do you mean?"

"I shall attempt to explain, savage—but take care that you do not weary me too far. Know you that we are an old, old race, great and powerful in our age. All the intelligent peoples of our galaxy pay us homage. But in the course of time, the resources of our planetary system, as well as the systems of our subject races, have become exhausted; and we are at present confronted not only with social and economic collapse, but the eventual disintegration of our galactic empire.

"The only solution to this problem was to find a new source of raw materials, both metal and mineral, beyond our galaxy. It was to this end that the expedition was organized. And through an accident, it has be-



## The Dark Continents of Your Mind

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fallen my lot to be the savior of my race. Your system is tremendously rich—each and every world a veritable treasure trove!

"The resources of your system will give us new strength. Quickly, will we crush any rebellions which might have taken place among our subjects. And after we conquer your system and establish ourselves, then"—and the alien's thoughts trembled with fanatical fervor—"then will come domination of the entire Universe!"

**B**OWEN'S thought stabbed back. "You're mad! We're not animals to be trodden under. We're intelligent beings with a science and civilization, though they may not be as far advanced as your own. But what we may lack in advancement, we'll make up for in courage. We'll fight your race until every last one of us is down."

"We'll put up one hell of a fight," Searles broke in grimly.

"Spoken like true savages!" the alien mocked. Then its thoughts hardened. "Seek neither to intimidate nor to compromise us! All that I have said is based not upon madness, but upon facts drawn from intensive investigation of the science of your peoples.

"We have spent much time in your system, studying your science and civilization. And we were not detected. Even now our presence is unknown. We have captured, looted, and destroyed your vessels, retaining a number of them as samples of your technical development, together with their cargoes and the finest specimens of their crews. We have broken into your beacon stations and carried away large quantities of metals and equipment.

"And mind you this, savages, we were not hindered the slightest bit in



our deprivations. We have encountered no opposition worth thought. If your capacity to fight us were as great as you claim, we should have been destroyed long ago. It is you who are mad."

Bowen's mind was whirling with an awful realization. Dimly, he caught repercussions from Searles and Platt. He gritted his teeth against the bitter disappointment and chagrin which welled up within him.

It was the aliens standing here before him who were the mysterious pirates that had been terrorizing the System!

"We're fools! Blind fools!" Searles raged.

"Indeed, you are," the alien sneered. "What more evidence do we need of the barbaric stupidity of your race?"

Bowen slumped against the wall, feeling sick and defeated. Pirates would not attack the station, for they were already present. There would be no opportunity for him and the two Rangers to reach the weapons. They would be murdered as had been the men in the other beacon stations. Earth would go unknowing of the disaster that was coming.

But suddenly he was coldly, furiously angry. If he had to die, he would take as many of the aliens into extinction with him as he could. His life didn't count. Alice didn't count. The only thing that mattered was the System—millions of lives that had to be saved.

This group of five aliens constituted the sole menace. If they were removed, the others would never know about the Solar System. The rebellion of their subject races would preclude any possibility of another expedition finding the System again.

"Enough of this!" the alien ground out harshly, confused and angered by the chaotic play of thought from the

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three men. "The main purpose of our visit here was to obtain another specimen of your race to replace one who has just died. The fact that there are three of you makes it all the more satisfactory. We need you as subjects for our scientists to experiment on in order to determine what types of weapons will be the most effective upon your race.

"Remove your telepathic devices and come with us. Offer no resistance. Our deaths will avail you nothing, for though I refrained from mentioning it before, a companion vessel awaits us just off one of the satellites you know as Ganymede. There were really two vessels lost from the expedition, you see." The alien swayed forward, its tentacles reaching for the telepathic devices. It had laid aside the staff with which it had communicated with the men. Connection with them was broken.

**B**UT NOT among the three themselves. Just before his headpiece was taken from him, Bowen caught a fragment of a lightning-like interplay of thoughts between the two Rangers. Fierce, desperate thoughts.

The faces of Searles and Platt were drawn and lined with a deadly resolve. Their eyes glittered with an almost feverish light.

The leader of the aliens took the telepathic headpieces from them and turned toward the spiraling ladder. Brandishing their weapons, the four other aliens began to close in upon the men.

Even as they moved, Searles was speaking. His voice was gentle, insistent. It carried an undertone that brought an aching lump to Bowen's throat.

"Bowen, you're still young yet, see?" Searles was saying. "Platt and I have had enough of a fling. It's our duty to die anyway. We're going

to jump these things. Your job is to get to our ship and warn the outpost on Callisto. You've got to do that, Bowen. These things must never return to where they came from."

Bowen shook his head, his eyes filled with pain and a great admiration. But Searles gritted aside the words of protest that rose to his lips.

"Damn it, kid, you've got to do what I say! I'm a representative of the Earth Council, see? You're a cadet, and as such are under the orders of the Council. I'm giving you orders, see? And you've got to obey them."

Bowen's face was suddenly old. He said nothing. But his eyes said things that went deeper than mere words.

"So long, kid," Platt whispered.

They were at the ladder now. The two Rangers had maneuvered themselves so that Bowen was nearest it. The leader of the aliens had already started down. The other four were waiting for the men to descend.

And then Searles and Platt exploded into action.

They hurled themselves at the four aliens, their hands clawing for their holstered pneumatics.

That was the last Bowen ever saw of them. But he was always to remember them as they were in that moment when they catapulted forward, their faces set in expressions of indomitable determination, their eyes blazing. It was like an unforgettable scene from some fantastic televideo play. The rest was a kaleidoscopic whirl of sound and action.

His breath sobbing in his throat, Bowen hurled himself down the ladder. Almost two months up and down that ladder had given him the agility of a monkey, the sure-footedness of a mountain goat. He knew every rung, every turn. Now he went down like

a lightning bolt along a path of ionized air.

The leader of the aliens was half way down. As if warned by some subtle sense of danger, it whirled around. But scarcely had it brought up its weapon, when Bowen hit it. The terrific impact lifted the alien from the ladder and sent it sailing across the room to hit suddenly against a wall. Overbalanced, Bowen toppled over the hand rail, but his clutching fingers caught a rung and he dropped easily to the floor.

One glance assured him that the leader of the aliens was dead. Its body had been soft, fragile, little more than a huge brain in a tentacled case. It sprawled grotesquely upon the floor, a nauseous yellow-green liquid beginning to fill the space inside its transparent suit.

There was a sharp crackle and Bowen sucked in his breath, wincing in agony as something burned along his arm. Two aliens were coming down the ladder.

**F**RANTICALLY, Bowen flung himself down the rest of the way. Again the crackle sounded, and this time pain knifed across his thigh. He somersaulted over the hand rail, landed jarringly half upon his feet and knees.

Before him was the airlock foyer, behind him the engine room. He darted for the space suits dangling on their hooks in the foyer. But even as he did so, he knew that he wouldn't have time to get into one and out of the airlock. The two aliens were coming fast. They had seen the dead body of their leader. Now they were out for vengeance.

Bowen hurled the airlock foyer door shut. But hardly had he done so when the crackles lifted to a whine and the door swiftly began to glow a

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cherry red. In a matter of seconds, he knew, it would be molten.

He crouched against one wall, his gaze swiveling desperately about the room. And then his eyes lighted in incredulous surprise.

Just to the right of the inner door of the airlock was a heat-beam. It was one of the three large weapons which Searles and Platt had set up about the station.

Bowen leaped for the weapon, brought the tapering vulcanium muzzle to bear upon the door, which already was white and beginning to run. He had tinkered with standard types of weapons at ground school. He knew what had to be done.

A flick of the ignition switch, and a bolt of ravening energy licked high on one wall. Bowen steadied the gun by putting his weight against the hand-grips.

Molten metal sloughed away from the door, and now there was a swiftly growing hole. It was into this hole that Bowen directed the terrible finger of the heat beam. Already weakened, the door blew outward like an exploding soap bubble. Bowen caught a momentary glimpse of the grey bodies of the two aliens just before the beam struck them. A glimpse—and there was nothing.

With a gesture of infinite weariness, he switched off the weapon. He waited, listening. But as the minutes dropped away, no sound came to his straining ears, and at last he accepted the realization that he was the only one left alive in the station.

He groped his way up the ladder and entered the control room. His eyes clouded with pain. The body of Searles lay draped across the control board. Only his dark hair was recognizable. His green and gold uniform, once so bright and crisp, hung in charred tatters. Andy Platt lay half

over the remains of one of the two dead aliens, an expression of terrible anguish upon his homely face, thinner now and older in death. The rest of the room was a shambles. Wielded with vindictive thoroughness, the terrible weapons of the aliens had cut great swathes of destruction.

Bowen could reconstruct what had taken place. In their sudden drive upon the four aliens, Searles and Platt had hoped to throw them into confusion. They had obviously known that it would be impossible to get all four. They had been prepared to die.

FROM THE position of Searles' body, it was clear that he had whirled around from his attack and leaped for the televideo set, hoping to get out a warning. Either he or Platt had already disposed of one of the aliens. As Searles dove for the televideo, one of the three remaining had cut him down. Platt had made a futile effort to avert the death of his friend. Failing to do so, he had exacted swift vengeance. Then he, too, had gone down. Furious, the remaining two aliens had wrought havoc upon the interior of the control room.

Bowen realized that he had been the ace-in-the-hole. The main purpose of the attack made by the two Rangers had been to enable him to escape and reach their ship. Searles had known that he might fail in his attempt to reach the televideo set and get a message through.

Gently, Bowen removed the body of Searles from the control board. Then he turned his attention to Platt. He laid the two Rangers side by side, covering them with blankets from the bed. For a long while, he stared down at their still forms, and as he looked, a little more of the youthfulness went out of his face.

He didn't know how long he stood there until he remembered the second alien vessel which was waiting off Ganymede. When he did it was a sudden surge of dismay.

That second ship was a sword of Damocles hanging over the System. Should it ever return to its galaxy, carnage and enslavement would be the result for the Solarians.

Bowen crossed to the control board. Like the televideo set, it was a twisted ruin. Whole banks of keys, tubes, and dials had been obliterated. The delicate wiring and relay system was fused into a useless mass.

The great space beacon on the roof of the station was dark. The complex and fragile mechanism in the control board that was its brain was dead. Only with a complete repair job would it ever function again. And Bowen had neither the time nor the materials to do that.

"The beacons must burn!" That was the watchword of the men who tended them.

The beacon on Io was dark. Bowen knew that someone would come to investigate the reason—but precious hours would pass before anyone got worried enough to do so. Even now, the aliens off Ganymede must be growing suspicious at the failure of their companions to return. Soon they would come to find out what was wrong.

His heart racing with urgency, Bowen descended to the airlock foyer and climbed into a spacesuit. He struck out for the Ranger ship in which Searles and Platt had arrived. In the ship would be a televideo. He could make contact with the Ranger outpost on Callisto. Searles had told him that the Ranger Fleet was preparing for an expedition against pirates. Now the Fleet would be warned, would know who the pirates really

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were. Men like Searles and Platt, the Rangers were. They wouldn't fail to wipe out the aliens, even though it took every man among them to do so.

**A**ND THEN, within fifty feet of the vessel, Bowen stopped dead in his tracks. It was as though a giant hand had suddenly gripped him.

For the Ranger ship had been destroyed. All that remained was an assortment of twisted girders.

After landing and rendering unconscious the men within the station, the aliens must have turned one of their awful weapons on the ship. They had reduced it to a mere skeleton of metal.

Bowen's gaze shot around desperately. His haggard face was covered with beads of perspiration. He felt trapped, futile.

Not far distant was the cube-shaped vessel of the aliens. Bowen's eyes settled upon it, narrowing. In another moment, he was running clumsily towards it.

There were no port holes in the strange vessel. Its silvery expanse was unbroken, save on one side where a rectangular door fitted flush with the hull. A short scrutiny, and Bowen knew that the only way to gain entrance into the ship was by force. There was no handle in that door, no button, nothing to show how it opened.

Slowly, tiredly, he turned away. Cutting into the ship would take time—and with the strange alloy of which it was constructed, he doubted if any weapons or tools which he had at hand would be effective. Nothing short of space artillery would pierce that hull. And there remained the almost certain possibility that he wouldn't know how to operate the vessel even if he did get in.

With eyes that held only a vast bitterness, Bowen gazed up at the

great orb of Jupiter. Ganymede had swung around behind it. Callisto was off just to the right. Callisto! There would be men there. Rangers. But men that he couldn't reach.

Searles and Platt had died so that he would be able to reach and warn those men up there. And now he couldn't, for every means was closed to him. They had died in vain, those two Rangers.

That last thought was agony to Bowen. Biting his lips, he turned and began to plod back toward the station.

He had to do something, he told himself desperately. There must be some way in which he could get out a warning. He shook his head, trying to get some order into the chaotic race of his thoughts.

Suddenly the idea of building a huge bonfire occurred to him, but he rejected this at once; a fire wouldn't burn in Io's neon atmosphere. And then—at that moment it seemed so irrelevant that he almost pushed the thought aside—he remembered something Platt had said in the control room.

"Reminds me of one of them funny tubes—what do you call 'em?—that the scientists monkey around with."

"You mean vacuum or cathode tubes?" Bowen had answered.

Bowen's figure tensed, a brightness springing into his widening eyes. Neon. Vacuum tubes. Of course!

He almost deafened himself with the shout he released inside his helmet. Galvanized into sudden, furious activity, he raced back to the station.

**F**OR MORE than twenty minutes, Bowen was busy. When he was finished, a simple yet enigmatic contrivance had taken shape outside, on the landing field before the station. It was in the form of two metal plates



fastened to rods of a non-conducting material, and spaced one hundred feet apart. Each of these places were connected in a circuit. In the engine room, Bowen pulled a knife switch. The circuit was closed.

His blood drummed in his ears. Would it work? Anxiously, he replaced his helmet and hurried out of the airlock. A triumphant grin spread over his lips.

It had worked.

Between those two metal plates a great, brilliant red glow now spread. It was a distress signal that couldn't fail to be noticed by anyone who might be wondering why the beacon on Io had gone dark.

Bowen stood staring up into the sky until his eyes ached and a dizziness in his head announced that the air in his suit was getting bad. He returned to the station, removed his suit, and resumed his eager watch. Only now did he become conscious of the throbbing pain in his seared arm and leg.

Tediously, the time inched away.

And then his pulse quickened. Not one, but two Rangers ships were coming. They had seen the red glow of the signal. They had come in answer.

It seemed hours, years before the Rangers left their ships and entered the airlock. There were more than a dozen of them. In the foyer they flipped back their helmets, staring from Bowen to the glow of the signal.

"What's wrong, young fellow?" one of them demanded, his sharp gaze taking in the blackened ruin of the airlock foyer door, melted by the blast of the heat-beam. His hair was grayed at the temples, and he wore the stripes of a captain.

Swiftly, Bowen explained. He took the Rangers on a tour of the station to bear out the fantastic truth of his story. Sight of the bodies of the aliens



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convinced them more than any words.

The eyes of the Rangers hardened, and a cloak of bleak purpose seemed to settle over them. They turned to go. But before they did so, they gave a stirring, simple salute to the two, covered forms that lay there so quietly on the floor of the control room. Then, replacing their helmets, they began to file from the station.

The Captain paused. His brown hand gripped tightly at Bowen's arm.

"We'll get them, kid," he promised softly, yet terribly grimly. "And we won't need the Fleet to help us, either." Then he, too, was gone.

Now that the long minutes of tension and strain were over, Bowen felt exhausted, unutterably weary. He made a futile attempt to clean up the control room, but did not succeed. He fell asleep in one of the chairs, close by the bodies of Searles and Platt. And as he slept, he seemed to feel their presence near him.

**I**T WAS the piercing drone of the airlock buzzer that awakened Bowen. He hurried down to the foyer.

A group of men in spacesuits stood at the outer door of the airlock, waiting to enter. Though dim in the view-screen, their faces behind the glassite helmets were eager, smiling. A momentary thrill of elation shot through Clay Bowen.

He did not bother with the communicator, but pulled the opening lever at once. The Rangers tramped into the room. Without speaking they removed their heavy metal suits, hanging them upon the prongs which projected from the walls.

A tall, space-burned oldster, with a shock of thick, white hair, swung around to face Bowen. He held out his hand.

"I'm General Price," he said. "These"—gesturing to the others—

"are my men. So you're Clay Bowen?"

Bowen nodded, feeling himself completely unable to speak.

General Price gripped the young beacon tender's shoulder. For a moment it seemed that he would not be able to speak, either.

"Captain Randall got them, lad," he began softly. "He contacted us before the battle began, managed to get a complete report through. His name will go down on the honor roll of the Rangers, along with those of Searles and Platt. You see, Captain Randall and his entire detachment of six vessels were wiped out. We and the rest of the Fleet weren't in time to help. But the alien ship is in our post on Callisto. There isn't much of it left."

"I'm glad, sir," Bowen said simply. "More glad than I can say in words."

"We owe it all to you," General Price reminded. "If it weren't for your ingenious signalling device, we'd never have known about the aliens until too late. I think I know how you managed to accomplish it, but I'd like to have you explain to my men."

Bowen moistened his lips, feeling young and terribly awkward under the smiling gaze of the Rangers.

"I'd never have thought of doing it myself if it wasn't for a remark by Andy Platt," he began. "He likened the exterior of Io to a vacuum or cathode tube during a conversation. You have all seen these tubes on Earth or Mars in the common form of a neon sign. When I was unable to get a message through to the outpost on Callisto, I remembered what Andy Platt had said.

"Well, there isn't much to what I did. I just got two aluminum plates from the station for electrodes—anode and cathode—and set them up a hundred feet apart on a non-conduct-

ing posts. With insulated cable from my supply of repair materials, I connected them to the generators in the engine room. Io's neon atmosphere is at a low pressure—almost a vacuum—such as we must obtain for cathode tubes to function. When the current was run into the electrodes, a huge, crude neon sign resulted. That's all."

"That was enough, lad," General Price said. "We saw your signal." He studied Bowen a moment. "You're a cadet, aren't you, and have to serve here a year to earn your stars, in addition to another two on flying government junk-heaps before you get your commission?"

"Yes, sir," Bowen answered, holding his breath against the sudden leaping of his heart.

General Price's grin was almost youthful.

"I think," he remarked, "that the the Earth Council will be glad to give you your stars and commission at once—or anything else that you may want, for that matter."

They were cheering, then, the Rangers in the foyer. Their noise filled the air with deafening volume.

But to Clay Bowen it seemed to come from far, far away. He was back in his thoughts with the girl whose name was Alice. How bright her gray-green eyes were! And then there was Nick Searles' twisted smile and Andy Platt's slow drawl. And then he gulped them all away, and things were blurred and hazy before his eyes.

"I'll have two boys," he whispered, as though he had settled some momentous decision. "Two, tall fine kids. And I'm going to name them Nick and Andy."

"Right," said General Price gently. "Damn fine names, both of them."

THE END

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# MINIATURE MOON

★ By CHARLES RECOUR ★

IT IS NO secret that the U.S. government is heavily engaged in rocket research and that it has two pet projects in mind—one, the first rocket propelled device to the Moon and second, a minor satellite around the Earth. Both of these ideas are "hot" and a great deal of work is being expended upon them—though a satisfactory amount of information as to their progress is not being reported.

The second of these ideas, the secondary satellite seems to be even more promising than the Moon rocket—at least, right now. The amount of energy, the size of the rocket and so forth are considerably less—the project is more within reason at this moment.

Consider the advantages offered by such a satellite around the Earth. Above all—say it rotated around the Earth at a distance of a thousand miles—it would act as an observatory laden with instruments such as spectrographs, telescopes, counters and the like, all of which would radio their information back to Earth. A great knowledge of the actual conditions in space could be obtained. The satellite would be completely automatic, of course and unmanned.

Launching it into space would involve the use of the two-step rocket—which we know is being strongly and practicably studied at White Sands, New Mexico. The satellite would be the upper part of the two-staged rocket. As it rotated in space,

numerous antennas would project from it. These antennas might be in the form of radial wires, thus making the body a suitable target for radar observation and control, even at that surprisingly large distance.

Power would be afforded by a battery system, perhaps basically powered with some sort of atomic generator. As time went on the satellite would become an important, navigational—or rather astrogeographical aid—in any future flights to the Moon.

Proposals have been made, suggesting that a super-satellite be created which would serve not only as an observation post but also as a secondary rocket launching platform. This is perfectly possible for it would mean essentially the launching of a rocket from a greatly reduced gravitational field—a field five thousand miles away from its greatest intensity.

Such a rocket satellite could be designed to rotate around the Earth at any speed—or it could be made stationary although this latter probability is not very great—people might not feel quite comfortable with a heavy metal "moon" hovering over them, even if it was five hundred or a thousand miles away! Never the less, we shall see the construction of a satellite in our time—perhaps a lot sooner than we think. Watch for the song writers' new word for rhyming—the "Smooon"—the "secondary moon."

---

# OCEAN BORER

★ By JUNE LURIE ★

A LITTLE known scientific activity which is consuming an increasing amount of the time of hydrographic departments of all countries, is ocean-bottom sampling. As everyone knows, five-sixths of the earth's surface is covered by water. But so little is known of the nature of the land beneath the water, that oceanographic research is being accelerated.

The renewed interest in the subject stems partially from the fact that it is realized that with the development of modern technology, men will soon be able to extract great wealth from the oceans' bottoms in the form of minerals and even gases and oils. It is common knowledge that along the Gulf Coast of the United States a large number of oil wells have been established and are producing oil, from hundreds of

feet beneath the surface of the ocean and from miles out into the sea.

Therefore a knowledge of what the ocean's floor is composed of is highly desirable. The oceanographic survey groups keep numerous ships traveling all over the world. These ships are equipped with ingeniously designed sampling mechanisms capable of reaching down miles into the sea and bringing up samples of the ocean floor. Someday many products, metals, chemicals and organic materials from the bottom of the ocean are going to make a big difference to our materials-starved economy. And there is always the tantalizing lure of hidden and undiscovered remnants of civilizations which are suspected to have once existed!

★ ★ ★

# RADIO - 2000!

★ By J. R. MARKS ★

IT'S NOT easy to predict the future these days, Jules Verne had it much easier back in 1870—there was so much to be invented! But such a negative attitude won't do. We can get a good idea of what things are going to be like by just paying attention to the important little things, inventions and developments, which are cropping up daily.

This magazine has reported for example, on the *transistor*—an ingenious gadget which seems the logical replacement for the vacuum tube. An extrapolation of the future may be made in radio by observing what's happening to this thing and to other devices of a similar ilk. Look around among numerous radios and you'll see that many—especially the smaller ones—lack power tubes. They use selenium rectifiers instead, because they're cheaper, run cooler, occupy less space, are simpler, and are just as good as vacuum tubes for rectifying alternating current. By projection they'll eventually be used in TV sets and almost anywhere, where D.C. must be gotten from A.C.

The transistor must be looked at in the same light. While it has not yet reached the stage of advancement as has the rectifier, it still holds great promise. This is borne out by the fact that it is possible for even amateurs to play around with the little devil now. It is out of the laboratory, so to speak, and into the world.

To refresh your memory; the transistor is merely a crystal of the element *Germanium*. Hitherto the Germanium crystal has only been used as a rectifying device for supplanting the conventional demodulating diode in radio equipment. A tube or mounting carrying the crystal of Germanium, with two leads projecting from it, each touching one side of the crystal, has the common property of "detecting" audio frequency currents. This tube is marketed as the IN34.

Experimentors have found that the tube can be taken apart and rebuilt into a "transistor." Essentially the transistor consists of the Germanium crystal touched on one surface by two wires or "catwhiskers" touching almost, and on the other face by a single wire. When a signal is fed into the input consisting of the bottom and one top lead, an amplified signal may be taken from between the other top lead and the bottom! This astounding ability of the simple crystal to amplify without complex circuitry, has not yet been fully explained and the whole thing is still in the theoretical stages. But it is just from such novel and unorthodox inventions as this, that great advances spring.

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of radio and television may be influenced by this invention. Quite likely vacuum tubes will be replaced. There is a big future for the transistor. We'd certainly like to get a peek into the big private and governmental laboratories where this sort of thing is being worked on. There's where you'll be able to read the future. And you won't need a crystal ball—just watch the Germanium crystal!

## PROTON MICROSCOPE

★ **By L. A. BURT** ★

**W**HEN THE electron microscope appeared not so many years ago, it made huge and generous contributions to science, in both the physical and biological fields, and it is being used on an ever-increasing scale. It now appears as if it will be strongly assisted by a new invention to come out of France.

The electron microscope depends for its success in high magnifications upon the fact that the magnification of an object is limited by the wave-length of the light used to observe it. The shorter the wave-length the higher the magnification. Also, electrons behave under certain conditions like waves of an extremely small length. Coupling these facts, gives us the electron microscope capable of magnifying several hundred thousand times.

Electrons are minute particles. It was realized that if there were still smaller electrically charged particles, an even better type of microscope could be designed. It has been known that protons, those positively charged particles which form a part of the nucleus of every atom, are much smaller, hundredths as large as electrons. What is more logical than to build a proton microscope? Of course this is easier said than done. But scientists in France have now succeeded in licking the problem and we will have the proton microscope. This instrument uses electric fields to focus the beams of protons created by ionizing hydrogen atoms. Operating in a vacuum, the instrument functions much like its predecessor, the electron microscope. There is a difference, though.

The proton microscope is capable of a magnification of about six hundred thousand diameters at present! This is three times the resolution of the other tool. Who knows what tremendous advances may be made because of this machine?

The question now may come up, are there other smaller electrically charged particles which we can use in another type of microscope giving even greater magnification? This is unknown as yet. But it illustrates admirably the limitations of science.

We know the physical laws governing what we can see. In order to resolve or separate two minute points we must look

at these points with light of with the equivalent of light—i.e., electrically charged particles—whose wave-length is smaller than the objects to be observed. With this knowledge and our knowledge of atomic physics we can know definitely just how small are the things we may see.

It would seem that Nature has set a limitation on how much we can know about physical science. More and more the philosophical aspects of science are bearing strongly on the actualities of science. It is possible that some new discovery may change this entirely, but it is unlikely. On the other end of the scale, we seem to think that as far as size goes, the largest things the Universe may contain or at least which we are privileged by this law to observe, is the super-galaxy.

Such philosophical limitations however do not worry the practicing experimental physicist too much. He has had successful answers to all his problems, lately.

## TO THE STARS

★ By LEE OWENS ★

**T**HIS IS a eulogy to a great man. Russell Porter, aged seventy-seven who died of heart attack in his home on February 22, nineteen forty-nine. His name doesn't mean much to the average person, nor is the scientific world as a whole, upset, but to certain groups of Americans, Russell Porter's death is akin to that of President Roosevelt.

For Russell Porter was the patron saint of amateur telescope makers, everywhere—and in addition, he was one of the outstanding figures behind the origin of the concept, the design and the construction of the two hundred inch reflecting telescope on Mount Palomar. Furthermore, Porter's work is familiar to almost anyone who has ever seen pictures or diagrams of the large telescope.

Porter was an unusual figure of a man; for the most part self-educated, he was a skilled draftsman, machinist, and technician in the highest sense of the word. It was he who put amateur astronomy on a scientific basis, it was he who did so much for the development of the reflecting telescope. During the War, he served as an artist-consultant to the Government on many highly secret and important jobs. Among his outstanding abilities, was that of being able to dissect a complicated machine with a pencil and paper, converting it into a series of simple pictures capable of being understood by a novice, and contributing seriously to anyone's understanding of an apparatus, scientist or layman.

It is fitting to note that Russell Porter was typical of a host of Americans who do not receive or desire recognition in the form of glory, yet who contribute more to our culture than most of the glory-men. We are referring to the unsung host of

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technicians and scientists whose work does not necessarily capture public imagination, but without which, American science—all science, for that matter—would be much poorer.

While the two hundred inch telescope was designed by no one man, but rather by dozens of engineers and scientists, it was Porter who sparked a good deal of the tricks and techniques in building it. It was Porter who, through the medium of his facile tongue and lucid sketches, translated ideas, suggestions and problems, into ingenious forms of easiness for the stolid engineers. Many parts of the observatory were actually designed by Porter, including the dome itself, and his experience with small and medium size telescope design led to the application of this knowledge to the largest scope. Hale, the great astronomer, said that Porter was the most versatile man he'd ever met. Such men, characteristic of the great figures of the Renaissance, are rare today.

A stirring eulogy has been written to Porter by Ingalls, his good friend and amanuensis. A monument has been left behind, more suitable than any which could now be erected. That monument is the two-hundred inch reflecting telescope and the tens of thousands of smaller reflecting scopes built by American and foreign amateurs. No, Russell Porter won't be forgotten by men of science anywhere—his soul is among the stars he loved so well.

## WHERE? - IN SPACE

★ By A. MORRIS ★

**T**HE METHODS of navigating a hypothetical space-ship have been worked out pretty well already—long before men have gotten into space. The theory has been refined until we know pretty well how a space ship will be guided through the trackless wastes of deep space. We can generally consider two methods, amazingly similar to present-day navigation on the sea and of aircraft. Let's call the method, "optical" and "radio."

Radio methods refer to fixed points or positions in space of radio stations sending out definite beams, much as today's stations do. These transmitters, numerous and pouring radio waves out to spacecraft equipped with hyper-sensitive receivers will act as reference points for the ships.

This method of navigation however will really be the second one employed after space travel has become standardized and common. It will depend upon the construction and location of numerous guide-posts which will come only with time and experience. This will be the simplified system for Solar Navigation.

The major method which interests us now is, of course, the optical system, the one in which instruments similar to the sextant are used. "Shots" or "fixes" will be



made on known celestial bodies like the planets, the stars and so on, and from astronomical knowledge, position can be computed.

The optical instruments will be essentially nothing more than refined protractors for measuring angles. We already have these in quantity and of high quality.

The primary difference in sea and space navigation lies in the much greater accuracy needed in the latter. Extremely small angles, tiny angular openings must be measured to a very small part of a degree probably in hundredths of a second of arc. This accuracy in turn depends on the scales and their graduations and the quality of the optical equipment supplementing them. None of these things are hard to attain. In fact right at this time dividing engines which graduate scales for fine angular measurements have been built with extraordinary accuracy. We may say without exaggerating that the accuracy of future space navigation will depend to a great degree on the "ruling" engines we now have.

Dividing engines which are essentially accurate machines which reproduce themselves, are kept in rooms at a constant temperature, away from human hands and when they are set up to work, they are not touched until the job is finished.

It is an impressive sight to see a dividing engine in operation. Silently and slowly it makes its slight marks in the plate of metal to be graduated. Automatically it imprints a copy of its own scale. And the deviations are measured in millionths of an inch.

Who would think that space navigation would be so advanced? But that is often the way with remote projects. Even now our shops and laboratories may contain things which will change the future.


## ELECTRETS

By JON BARRY

AS THE permanent magnet has become a fixture of our technological society—it is used on so many things from thermostats to loudspeakers—so a new gadget called the *electret* is likely to be a part and parcel of things. The electret is the electrostatic equivalent of the permanent magnet. As a magnet has associated with it a magnetic field, its chief characteristic, so, an electret has associated with it, a permanent electric field.

Basically an electret is nothing but a plate or disk of a di-electric material like wax or plastic which has been heated to fusion in a strong electric field and then allowed to cool slowly. When this is done, it is found that the faces of the disk have acquired an electric polarity of considerable charge which is to all intents and purposes, permanent. Carrying the analogy with magnetism further, a "keeper" of metal foil is wrapped around the electret pre-

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serving its charge much as an iron "keeper" is placed across the poles of a permanent magnet to help retain its magnetism.

It can be seen that there is a strong correspondence between the two qualities of the electret and the magnet. It is one more step in the long trail of scientific ambition to unify the theories of electricity and magnetism. The correspondence between electric and magnetic fields has always been known, but until fairly recently the existence of the electret was unknown. While the electret is as yet not used practically, numerous laboratories, as well as private experiments are studying the gadget with a few to utilizing it. This is very promising, particularly because the electret can be constructed and played with by amateur scientists without a great deal of equipment. Who knows what they may find?

The early development of the electret was undertaken in Japan and during the recent War, U. S. Army and Navy investigators found that the Japanese had constructed a condenser-type microphone employing an electret. It was valuable to the Japanese services because it was so light and compact. Consequently it is likely that we shall see the electret first used for microphonic apparatus and for recording equipment.

Perhaps there are uses for it which we cannot yet suspect. We are inclined to think however that the major use of the electret will be found in learning more about the nature of dielectrics and electric fields—though it is not wise to underestimate the practical importance of any new gadget—look at what happened with the vacuum tube?

Keep your ears open for further mention of electrets—we suspect that they're going to be of considerable importance in the not-distant future....

## TEST FACTORY



By W. R. CHASE



A PHRASE which is becoming quite common in the American language is "pilot plant." A pilot plant is a miniature factory and it is a direct outgrowth of the application of research to industry. Supposing for example, that a new chemical process is discovered in the laboratory and that it looks like a good commercial bet. Does the process go immediately into action? Do the factory managers immediately build a new factory and start production?

The answer is, but definitely—no! For one thing it is an entirely different thing doing work on a laboratory scale and doing it on a factory scale. Some intermediate link must be found. So here's what happens. They construct a pilot plant. A pilot plant is mid-way between the laboratory and the factory. It is in effect a

small factory capable of turning out pounds and quarts whereas the factory can turn out tons and thousands of gallons. In the course of operating the pilot plant, the bugs which are likely to develop can be discovered in time and their cause ironed out.

The pilot plant is sort of a model of a factory. It was gotten really from the idea of testing with models. Aircraft and ship designers have long done this. Then it occurred to some bright guy that the same thing could be done with factory chemical production thus saving a lot of head-aches when it came to finally building the factory.

Now this procedure of model-making is being used everywhere. In an airplane plant or for that matter, in a factory doing anything from making refrigerators to TNT, before the factory is set up, it will be modeled on a small scale. For each machine, for each electric light, for each conveyor, a miniature mock-up will be constructed. Then almost like children with toy houses, the factory managers can study in miniature, exactly how their finished plant will be arranged. Many times, bugs show up which hitherto would be hardly expected. It is much easier to study models and one gets a much clearer picture from them than from cold two-dimensional blueprints.

It is now a common sight to walk into a factory office and see a complete model of the factory and its working parts. From this the manager knows down to the last board where every machine and every room is. When a factory covers millions of square feet of area, the value of this technique can be appreciated.

So model plants and pilot plants are one more idea for efficient production. Is it any wonder that our country out-produces the rest of the world? It is a fetish with Americans to do the job better, faster, and more efficiently, be it making safety pins or rocket planes. Stick around, gang, and you won't recognize the country in twenty years—and very likely you'll be able to go to Washington and see a scale model of the whole United States down to the last chicken on Joe Dokes' farm in Timbucktoo, Washington!

## AIRPOWER VICTORY

★ By A. T. KEDZIE ★

A SHORT WHILE ago we ran an article—quite controversial—in which we criticized Naval airpower and in which we said that the aircraft carrier was an anachronism, doomed from the day the long range bomber was designed. This article drew numerous letters from readers sympathetic to the Navy's program for constructing super aircraft carriers. Some of the letters were quite vehement in their denunciation of what the writers regarded



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It's hard to hide the smile of triumph on our faces however. A short while ago the Navy started work—laying the keel—on a monstrosity large aircraft carrier, the *United States*. This gigantic vessel was to have cost about one hundred and sixty million dollars—and with its full complement of planes, to be worth in the neighborhood of five hundred million dollars. We have felt that this would be a criminal waste of vast sums of money—a crime against the country, so to speak.

Evidently we were right for the Government in the last few days ordered the stoppage of work on the carrier and the dismantling of the little to be done. By the newspapers you can see what a furor this caused. The Air Force fought against the foolish Navy policy of building such a white elephant, successfully. Thank God for the Air Force!

The objections to the carrier were these, and they're eminently sensible. At most, the carrier could carry twenty-four large bombers—and once launched the bombers couldn't land back on the carrier. We believe it could carry about seventy-five fighters. The Air Force maintained, and accurately, that it could put bombers anywhere the carrier could, that the bombers could land at fields, that the fighters too could be gotten where the Air Force wanted them.

Even if these objections did no good, it didn't require a genius to see why the Navy, even if it countered such arguments of the Air Force, could not defend the construction of the carrier. All it would take would be a few fanned torpedoes to sink it. Or a few sticks of bombs on its flight deck and elevator system! Or an atomic bomb! The Navy shut up. There was no arguing that such a huge aircraft carrier would be nothing but a sitting duck for a potential enemy.

The Navy has twenty-one ordinary carriers in service. We suspect that in any future war, they'll be knocked out easily—their only advantage is that they're less obsolete than the battleship. We are glad to see the unification of the armed forces including Army, Navy and Air Force. The most trouble seems to be with the Navy however whose adherents can't see the broad picture of what future war is like, and who won't admit that the Air Force has usurped the power from a fighting standpoint, of the Navy. The function of a Navy in a future war will primarily be transportation and supply—little else. Long range bombers have replaced the sixteen inch gun and the Naval bomber.

Fortunately our government has level-headed men in the defense departments, who can see the hand-writing on the wall. Praise the Lord that the monstrosity archaic, antiquated, old-fashioned super-aircraft carrier will not be built. In fact, the Navy should be concerned now with nothing but transports!

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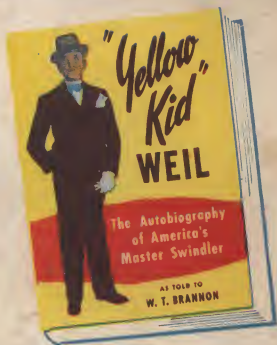
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